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Royal Assent to Transport Bill

IN an atmosphere contrasting strongly with the acerbities of the debate in the House of Commons on the Opposition censure motion on the Government's handling of the Transport Bill, the House of Lords on May 5 agreed to the Commons' amendments to the Bill. The Royal Assent was given on May 6, and the passage of the Bill has the immediate effect of giving the railways greater latitude in adjusting their charges. Only maximum freight charges need now be published, and below that level the Commission has freedom in fixing competitive rates. On the passenger fares side there is provision for rapid approval being given by the Transport Tribunal to temporary amendments of existing schemes which will produce not more than 10 per cent additional revenue. Such sanction may be given without a public inquiry and its attendant delays. These are immediate effects of the Bill becoming an Act, and knowledge of the future form of railway organisation must still await publication of the promised White Paper. The closing stages of the Bill on its passage through the House of Commons were characterised by procedural disputes which diverted attention from its contents to the intricacies of Parliamentary manœuvre, and did little to keep the public alive to the serious issues being decided. There has been far more emphasis on the use of the guillotine on discussion of the Lords' amendments than on the contents of those amendments. They numbered 70, but none really introduced a new issue, although considerable additions and redrafting were involved in several. The suggestion that inadequate time was allowed for their discussion was the basis of the Opposition's censure motion, defeated on Tuesday by 294 votes to 265. The Government took the line that the Opposition had attempted by delaying action on discussion of the Lords' amendments to reopen the principles of a Bill already passed by both Houses of Parliament, and its motion to this effect was carried by 293 votes to 264.

Steel Rationing Ended

STEADY increases in output of iron and steel enabled Mr. Duncan Sandys, Minister of Supply, to announce the Government's decision on May 5 that statutory control of the distribution of iron and steel, with the exception of tinplate, should end from last Wednesday. This statement, however, still leaves in being the voluntary arrangements for distribution of steel plate, for which both railways and the shipbuilding industry are keen competitors, so that it does not mean an end to restrictions on the building of new rolling stock. On the other hand, much freer and easier conditions should prevail in respect of permanent way maintenance and renewals and many other branches of engineering activity. Home production of steel this year is expected to reach about 17,500,000 tons, or some 1,300,000 tons more than in 1952. Supplies as a whole are now considered to be sufficient to meet home demands as well as to provide somewhat larger quantities for export. Mr. Sandys also expressed the hope that the satisfactory increase in home production should enable imports of steel to be reduced considerably. The general trend of production and estimates for future years justify hope that an end to steel sheet supply difficulties may also be in sight, and that full advantage may be taken of the new policy towards capital expenditure expressed in the recent Budget.

Markets in the Caribbean

CAUTIOUS optimism as to opportunities for British suppliers of railway material in Venezuela, Colombia, and Cuba is the keynote of the report of the Board of Trade mission which last winter visited those countries and the Dominican Republic. The mission was headed by Brigadier W. H. Crosland, of Parson & Crosland Limited, and included Mr. E. Bruce Ball, of Glenfield & Kennedy Limited. Prospects seem brightest in Venezuela because of the Government plans for building 2,800 route-miles of standard-gauge railway; re-equipment of the existing, largely obsolete lines may provide opportunities. In Colombia, although there is a short-term need for goods vehicles, rolling stock generally is said to be sufficient and the programme of new lines is less ambitious than in Venezuela. For British railway suppliers opportunities in Cuba lie largely in the United Railways of Havana, if the finance for their badly needed re-equipment is provided by the International Bank. In Mexico, where British enterprise in the past has played a major part in railway development, likely requirements are for rolling stock with some arrangement for credit or extended payment. In these four countries business must be done with Governments with no marked bias in favour of particular markets and prices must be keenly competitive. For obvious reasons diesel traction is likely to play an increasingly important part.

Freight Handling

SPECIAL goods train services, for palletised consignments only, between major industrial centres have been suggested by Mr. T. J. D. Morris, Assistant Transport Manager of Chiswick Products Limited; the suggestion was made in his paper "Modern Trends in Traffic Handling" read to the Institute of Traffic Administration annual conference last weekend. Such services would be

made possible, he suggests, by provision at major depots of palletisation equipment which would be uneconomic elsewhere. It may be that at least for some time a fork lift truck at every station would be an expensive luxury, despite its usefulness for other jobs and the tendency to reduce the number of stations handling smalls. The main long-term obstacle to palletisation, however, is not provision of equipment but pallet and package dimensions. These must suit not only vehicle but storage space, and convenience in handling, and railway users are far from agreement, despite the efforts of British Railways. Mr. Morris also stresses the advantages of trunking freight to concentration points for radial distribution, with savings to transport users in rates and handling costs. There is scope here for study of the highly developed organisations of forwarding agents in Germany and some other European countries where the *spediteur* procures for the medium- and small-scale transport user the advantages of trunking and saves the railways much of the high cost of handling less-than-wagonload traffic.

Fifty Years of Longmoor

THE Royal Engineers Transportation Centre at Longmoor, Hampshire, celebrates this year the fiftieth anniversary of the arrival at the camp of the first railway troops. In May, 1903, No. 53 (Railway) Company, Royal Engineers, reached Longmoor on its return from South Africa. Three years later, when there were three companies of railway troops at Longmoor, was begun the construction of the Woolmer Instructional Military Railway, the nucleus of the present Longmoor Military Railway, which extends from Liss to Bordon, and with sidings and loops has a track mileage of some 60 miles. The Centre in its present form may be said to date from 1925 when the first transportation and movements units of the Supplementary Reserve, composed largely of men drawn from the main-line railways, were raised. These units were mobilised in 1939 and were the first troops in the field of the transportation and movements branches of the Royal Engineers. The transportation branch eventually numbered some 150,000 officers and men in all theatres of war. Recruiting began again in 1948 for the reconstituted transportation units, which now include both volunteers and those who are on their reserve training after completing national service. Every year the public is given an opportunity of seeing the variety of work which is performed at Longmoor, and this year the public day will be Saturday, September 5, when a full programme of interesting events is promised.

State Railways of Thailand

BECAUSE Thailand has remained an independent State throughout the railway age, except for a short interlude during the second world war, her railways, of which a brief account is given on another page, have never long been controlled by any one colonial power, and management has tended to be eclectic in design and practice. This is apparent in the motive power and rolling stock, to which builders in seven countries in three continents have made important contributions, including deliveries over many years from the United Kingdom. A curious feature of the State railways was the laying of the earlier lines to 4 ft. 8½ in. gauge; subsequent conversion to metre gauge was due almost as much, perhaps, to a desire for standardisation as to the desirability of through running facilities with the Southern main line built to metre gauge to link with the metre-gauge lines of Malaya and Burma. In an industrially undeveloped, agricultural country not too remote from oil supplies, it was natural for the administration to turn to dieselisation, though in this field and in this region of the globe it showed considerable pioneering spirit in acquiring diesel locomotives for main-line passenger and freight working. With the recent growth of diesel traction in undeveloped Asiatic and African territories and the problem of maintenance by inexperienced staffs, successful diesel performance over many years on the Thailand State Railways deserves close study.

Keadby Lift Bridge

CONSIDERATION is being given to the suggestion that there is no longer need for a lifting span in the bridge carrying the railway and road over the River Trent at Keadby, Lincolnshire, on the former G.C.R. line from Doncaster to Barnetby. The present bridge was opened on May 21, 1916, replacing an earlier swing bridge, and a roadway as well as railway tracks were provided because of the Humber Conservancy Board's fears that a separate road bridge built at a future date might be a further obstruction to river traffic. At the date of opening, the 163-ft. lifting span, weighing some 3,000 tons, was the heaviest of its kind in Europe. The combined length of the one lifting and four fixed spans is 548 ft. Application to Parliament would be necessary if the lifting span were to be abandoned, which recalls the powers obtained by the Southern Railway in 1937 to replace the old drawbridge at Ford with a fixed structure in readiness for the West Sussex electrification. Occasions for operating lift and swing spans have dwindled with the spread of the diesel engine on land and water. If a census were taken of frequency and opening at the present time, it is likely that a high place would be taken by King's Ferry Bridge on the Southern Region branch from Sittingbourne to Sheerness, crossing the Swale, on which there is a fair traffic of sailing barges taking a short cut to the Medway.

Welding Worn Switch-Blades

A NEW technique has been established by the Atlantic Coast Line Railroad, U.S.A., in the building up of the points of worn switch-blades by welding, and is proving so successful that many of the blades so repaired have given better service than in their original condition. The welding rods used contain a high percentage of stainless steel, which has considerable resistance both to corrosion and abrasion. The work is carried out on six welding beds at a central depot at Savannah, Georgia, which can turn out over 200 reclaimed switch-blades every month, and to date, since its opening in 1946, has dealt with 10,000 blades in this way. According to details in the December, 1952, issue of *Modern Railroads*, the cost of repairing a switch-blade of the 100 lb. per yd. section averages $16, and one of the 132 lb. section about $20, or a fraction only of the cost of new switch-rails. Many of the switch-blades already have been built up more than once, and in theory there seems no limit to the number of times in succession that they can be reclaimed, but when discarding does eventually take place, it is usually because of wear of the rail behind the point and not of the point itself. All switch-blades removed from main or siding tracks because of wear or chipping are sent to the Savannah depot, and fewer than 2 per cent of them are rejected as irreclaimable.

Possibilities of Inductive Control

FAR-REACHING possibilities are foreseen by Colonel S. H. Bingham, Chairman of the City of New York Board of Transportation, in an inductive device already being used for certain railway signalling purposes. Its basis is the equipment of a railway vehicle with a closed electrical circuit tuned to a particular frequency, and the installation of lineside apparatus which will respond to the proximity of such a circuit when both are in tune. The principle can be compared with the use of an absorption wavemeter and its effect on an oscillator tuned to the same frequency. In effect the method not only detects the passage of a train at a particular lineside point, but identifies it by its characteristic frequency and so enables different trains to initiate different effects. Colonel Bingham suggests the use of the system for operating train announcing apparatus or actuating illuminated signs as well as for signalling and route-selection. As a further extension of these ideas he envisages its use for recording rolling stock journeys to facilitate compiling mileage records and keeping track of the times when vehicles are due for inspections. Looking further ahead still, he touches on the possibility of a fully automatic railway moving freight in small train-units without drivers.

Metre-Gauge Locomotives for India

THE firm of Robert Stephenson & Hawthorns Limited has recently completed an order for ten "YL" class locomotives built to the requirements of the Central Standards Office, Government of India. Of 2-6-2 type, the engines are required for metre-gauge branch line working and are designed for a maximum speed of 40 m.p.h. and to negotiate curves up to 358 ft. minimum radius. The locomotives are of plate frame construction and are joined together by a steel casting in front of the firebox. The boiler is supported at the smokebox end by a steel saddle casting and at the firebox end by an arrangement of rocker supports and at its back by breather plates. The cylinders are of cast iron, fitted with liners of a similar material, a feature of present-day design. Roller bearings are fitted to the leading and trailing trucks, tender axles, return cranks, and reversing screw, while the coupled axleboxes are of solid bronze with Ajax system of lubrication. The locomotives are described and illustrated elsewhere in this issue.

Take Your Seats

AN exhibition is being held in the Victoria Embankment Gardens, London, of some 80 new designs of outdoor seats. They have been submitted by numerous manufacturers, and include benches, back-to-back seats, circular seats, seats combined with lampposts, and seats for churchyards, cafes, and stations. A design with interesting possibilities for station platform use by reason of economy in space has a Y-shape concrete base supporting the seat and back, although using a single back rest seems to increase the ever-present risk of some users finding that the support does not come in the most comfortable place. Station seat design was developed quite early by the railways, even if comfort and diversity did not always go together. A design which comes at once to mind is that of the Midland which adopted widely a rustic pattern of seat leg and arm that well matched the Gothic of many of its stations. The Brighton rather favoured a massive, school bench design and the Great Eastern sometimes saved money and space by providing forms which projected from a wall. There was also great variety in the treatment of the ironwork at the ends of the seats which often embodied the company's monogram or was wrought into strange serpentine shapes.

Development in Steel Castings

LAST month's Customer-Founder Convention held in London by the British Steel Founders' Association afforded an opportunity not only for producers and users of castings to meet and discuss their problems, but for the producers to hear their customers' views and requirements expressed at some length in technical papers. This was a valuable departure from the principle sometimes followed at meetings organised for a similar purpose, when customers' participation is limited mainly to discussion of papers presented by the other side. The primary function of the conference was to collect information which will assist in taking steps to avoid the breakdown of steel castings used in critical phases of mechanical activity. For this purpose customers were invited to give a frank account of their experiences with steel castings and to make suggestions for their improvement, while experts in the steelfounding industry explained their own casting problems and the importance of adjusting design so as to enable the steelfounder to produce cheaper and sounder castings.

Railway experience with steel castings was the subject of a paper by Mr. R. A. Riddles, Member of the Railway Executive, to which we referred in our April 24 issue. In the ensuing discussion he dwelt again on the importance of saving weight, a consideration which had to be closely studied if the place of steel castings in rolling stock was not to be usurped by fabrication. There was no question, he said, that the railways would prefer to use castings if they could get accurate steel castings of suitable weight. These points of weight and accuracy were taken up by Mr. F. W. Rowe, of K. & L. Steelfounders Limited. He referred to the axleload problem, which Mr. Riddles said had been acute in a new British Railways standard locomotive now under design, where it had been necessary to revert to fabrication in many places where they did not want to have it in order to reduce weight. On this subject Mr. Rowe said there was no reason why a founder and a designer in collaboration might not take advantage of the alloy steels available today, which, with suitable heat treatment, should go a long way towards production of a stronger casting of a lighter weight.

In the matter of accuracy, as of weight, it was agreed that users must be prepared for some increase of cost. As far as technical possibilities were concerned, Mr. Rowe quoted a casting for a Centurion tank which was being made regularly and consistently to an accuracy of five-thousandths of an inch in all important dimensions, but the cost of the pattern equipment came to roughly £2,000. The discussion also touched on castings design, on which point Mr. J. Gibb, of the Carntyne Steel Castings Co. Ltd., commanded sympathetic agreement when he said that if designers would abide by the simplicity that was forced on them when designing a welding, many of the founders' troubles would disappear. Mr. Riddles suggested that today, in the light of modern science and engineering, it ought to be possible to re-design casting design, and he did not positively dispute Mr. Gibb's contention that many railway patterns were very old and outside all modern application.

The foregoing is typical of the frank atmosphere on both sides in which all the discussions were conducted, and suggests that further conventions on similar lines from time to time would be valuable in maintaining the mutual understanding now established, and directing effort along the most useful lines. The associated exhibition served a valuable purpose in illustrating the points made by speakers and displaying the variety and complexity of pattern to which the steel casting process adapts itself.

Ulster Transport Debated

THE Northern Ireland Government does not intend to liquidate the losses of the Ulster Transport Authority or assume liability for future deficits for a further period. This is a rejection of one of the main recommendations of the Northern Ireland Transport Tribunal whose report on the U.T.A. was debated in the Northern Ireland House of Commons on April 28 and 29. The report formed the subject of editorials in our November 28 and December 5, 1952, issues.

Mr. W. V. McCleery, the Minister of Commerce, who made this statement, said that the Government might re-direct its attention to the financial structure of the Authority but the essential was to adopt measures to put it on an economic basis. The railway system in Northern Ireland had not been offered, except for a period during the war, the volume of traffic to enable it to earn sufficient receipts to meet expenditure and provide for maintenance and renewal. The U.T.A. had lost about £1,500,000 on its railways in four years up to September 30 last, but had been able to apply about £635,000 profit from road services to reduce rail losses. The Government did not dissent from the view of the Tribunal that railway transport in the country could not yet be dispensed with, but considered it urgent to reduce the losses by all possible means, including further road-rail integration. Officers of the Ulster Transport Authority and Great Northern Railway were examining jointly all their operations to see what further integration could take place, how new techniques such as diesel traction could be extended, and what was the maximum rate of progress towards the point where losses could be eliminated or reduced to the minimum. He hoped that the reports of their investigations would be available before the end of the year. While they were going on, capital expenditure should be restricted and the undertakings would be expected to carry out all possible measures to co-ordinate service and cut out overlapping.

The Minister was satisfied that the Authority's application for abandonment of certain lines in Co. Down, Co. Antrim, and Co. Derry should be granted in respect of all sections on which services had been discontinued.

To put into effect the Tribunal's recommendations that the Government should liquidate the U.T.A. losses and bear those in future would be to place on the Exchequer a burden of such size that there would be serious repercussions in other directions. It could not therefore accept such proposals, even in principle. The Government considered that it should be incumbent on the Authority to consult the Minister of Commerce on proposals involving substantial expenditure, and that the Minister should have power to give general directions on matters of policy which might affect the public interest. The first proposal would not really introduce a new principle because the Authority had voluntarily brought to his notice proposals of a major character.

The Tribunal's recommendation that the Belfast Central line might be improved to allow the Bangor service to come into the city instead of terminating at Queens Quay should be held over until the result of the main investigations was known. The scheme might appear to have some advantages but would involve heavy expenditure. The Government felt that an annual review of the Authority's stewardship by the Tribunal, suggested in the report, would consume time and energy of officers to no purpose which could not be achieved under present statutory arrangements. The Minister favoured in general the idea of a consultative committee of the Authority and its users. The new Chairman of the U.T.A., Mr. G. B. Howden, had had long experience of the operation of transport services; his task would be arduous and if he and his colleagues made a success of the undertaking, they would deserve the grateful thanks of the community.

One member thought that the Government should give an assurance to the Authority that any losses which it incurred in operating the Northern Ireland lines of the G.N.R. should be a charge on public funds, and that it should consider returning road freight haulage to private ownership. Another said that the Authority had done excellently under trying conditions; it had provided the efficient service, if not one at a lower cost, intended in the "badly-designed and foredoomed Act of 1935." The assets of the G.N.R. which the U.T.A. would acquire ought to place it in a reasonably solvent position. Other views were that diesel trains should be extended. The Senate is to debate the report next week.

On April 30 the Bill to authorise the acquisition of the Great Northern Railway by the Governments of Northern Ireland and the Republic of Ireland was given its second reading in the Northern Ireland House of Commons. Mr. McCleery said that the G.N.R. debenture stockholders, the only section which had received interest for some years, would be paid interest on their holdings by the two Governments, who would bear the cost in equal shares from the date of the transfer up to the date of distribution, or for two months, whichever was the shorter.

Indian Railways in 1951-52

DURING the year ended March 31, 1952, the gross earnings in aggregate of all railways in India were Rs.294·14 crores (£220,605,000), no less than 11·2 per cent more than in 1950-51, and the highest so far attained. Both passenger and goods earnings showed new records. There were substantial increases in tonnage and ton-mileage, reflecting the continued improvement in the general economic activity of the country, the upward trend in the basic industries, and in many of them better relations between management and labour. There was, however, no longer an uninterrupted increase in passenger traffic as in previous years—though its volume was still 153 per cent greater than in the year before the war—but the introduction of higher fares resulted in the further increase in passenger earnings.

The operating ratio was the lowest since 1947-48, as a result of increased efficiency. Including suspense and depreciation reserve fund accounts, working expenses totalled Rs.224·04 crores (£168,030,000). Some of the more important statistics relating to the working of all railways in 1951-52 compared with those for the previous year are tabulated below:—

—	1950-51	1951-52	Percentage variation
Passengers carried (millions) ...	*1,307·80	1,232·10	− 5·8
Passenger-miles	*41,671·70	39,550·70	− 5·1
Passenger earnings (crores)	*99·22	111·42	+12·3
Average passenger journey (miles) ...	31·90	32·10	+ 0·6
Freight tons carried (millions) ...	92·30	98·00	+ 6·2
Net ton-miles (millions)	27,008·00	29,018·00	+ 7·4
Goods earnings (crores)	139·77	153·95	+10·2
Average miles a ton of goods was carried	293·00	296·00	+ 1·0

* Revised figures

Train-mileage run during 1951-52 exceeded that in 1950-51 by 7·14 millions or 4·17 per cent. The net ton-mileage per wagon-day improved from 434 to 469 on 5 ft. 6 in. gauge lines and from 186 to 197 on metre-gauge.

Gross earnings of the Government Railways during 1951-52 were Rs.290·82 crores (£218,115,000). After meeting all charges including depreciation totalling Rs.30·21 crores, but excluding interest charges, the net revenue on the results of working during the year under review amounted to Rs.61·75 crores. In accordance with the revised convention, Rs.33·41 crores, representing a dividend at 4 per cent on the capital invested out of general revenues in the railways, other than strategic lines, was duly paid, leaving Rs.28·34 crores, which was allocated, Rs.10·00 crores to the Development Fund and Rs.18·34 crores to the Revenue Reserve Fund.

As we have recorded from time to time, the regrouping of the major railways began during 1951-52, and during that period the Southern, Central and Western Railways were constituted. There were also 532 miles of new line under construction, including the 170-mile metre-gauge Kandla-Deesa connection, in addition to 16 miles opened for traffic during the year. The construction of some 50 more miles and restoration of about 240 miles, dismantled during the war, were sanctioned.

To meet the need for all-steel lightweight passenger coaches, the construction of a new factory at Perambur, near Madras, was authorised. These vehicles will be built by modern production methods, with the aid of the Swiss Car & Elevator Manufacturing Corporation Limited, of Schlieren, Zurich, which specialises in their design and construction. These shops, which should be in production by 1955, are estimated to cost Rs.4·5 crores (£3,375,000). Working single shift their capacity will be 350 broad-gauge, unfurnished coaches yearly; furnishing and finishing will be executed in existing railway shops. New carriage and wagon shops costing Rs.65 lakhs (£487,500), were also under construction at Jagadhri to serve the Northern Railway.

The sum allotted for the year's track-renewal and jointwelding programme was just over Rs.1 crore (£750,000). All civil engineering construction work at the new Chittaranjan locomotive works was completed during the year. The numbers of standard locomotives placed in service were 75 broad gauge and 28 metre gauge; on order were 124 broad gauge and 50 metre gauge. Of the 124, 107 "WG" class were ordered from Chittaranjan, but the order for the 50 "YP" class metre-gauge engines was placed with the Tata Locomotive & Engineering Company. Seven broad-gauge electric locomotives were also ordered from abroad.

Orders were placed with different firms for 432 broad-gauge and 450 metre-gauge coaching vehicles, including 300 all-steel third-class broad-gauge coaches from Hindustan Aircraft Limited. Two hundred all-metal metre-gauge coaches were ordered from abroad. During the year 507 broad- and 264 metre-gauge coaching vehicles were put into traffic.

The annual report concludes by describing, among others, four major accidents that occurred during 1951-52. Details

of them were given in our summary of the Ministry of Transport Chief Inspecting Officers' report in our December 5, 1952, issue.

British Transport Commission Traffic Receipts

BRITISH RAILWAYS goods receipts for Period 4, the four weeks to April 19, were adversely affected by the incidence of the Easter holiday during the period, which in 1952 also embraced that festival; some comparison with last year therefore is possible. Merchandise receipts at £8,046,000 were slightly up on the 1952 figure, though it is impossible because of the holiday to say whether this otherwise would have been a more satisfactory period, reflecting the rate of increase of last December.

Mineral traffics, however, at £3,528,000 were a distinct improvement on the 1952 figure of £3,094,000, and with allowance for the Easter weekend compare very well with £3,679,000 for Period 3. Coal class traffic receipts were much what might have been expected; at £8,245,000 they were below the £9,121,000 of the preceding period and, with increased coal raisings, exceeded last year's figure of £7,644,000.

	Four weeks to April 19		Incr. or decr.	Aggregate for 16 weeks		Incr. or decr.
	1953	1952		1953	1952	
	£000	£000	£000	£000	£000	£000
British Railways—						
Passengers	8,656	8,781	− 125	28,631	28,013	+ 618
Parcels, etc., by passenger train	2,873	2,676	+ 197	11,145	10,518	+ 627
Merchandise & livestock	8,046	7,845	+ 201	33,846	33,427	+ 419
Minerals	3,528	3,094	+ 434	14,253	12,995	+ 1,258
Coal & coke	8,245	7,644	+ 601	34,790	32,243	+ 2,547
Total British Railways ...	31,348	30,040	+ 1,308	122,665	117,196	+ 5,469
British Railways C. & D. ...	876	859	+ 17	3,529	3,520	+ 9
British Road Services ...	5,850	5,789	+ 61	23,750	23,796	− 46
Road Passenger Transport: Provincial & Scottish ...	3,501	3,346	+ 155	13,051	12,223	+ 828
London Transport—						
Railways	1,342	1,405	− 63	5,467	5,249	+ 218
Buses & coaches ...	2,994	3,004	− 10	11,626	10,923	+ 703
Trolleybuses & trams ...	694	774	− 80	2,721	2,855	− 134
Total London Transport	5,030	5,183	− 153	19,814	19,027	+ 787
Ships...	723	735	− 12	2,432	2,502	− 70
Inland Waterways: Carrying—						
Freight charges	64	65	− 1	273	272	+ 1
Total from passengers ...	17,504	17,609	− 105	62,352	60,087	+ 2,265
Total from freight, parcels & mails	29,888	28,408	+ 1,480	123,162	118,449	+ 4,713
TOTAL FROM CARRYING ACTIVITIES ...	47,392	46,017	+ 1,375	185,514	178,536	+ 6,978

The Easter holiday mainly accounted for British Railways passenger receipts' excess over the Period 3 figure, £8,656,000 against £7,058,000: they were, however, slightly down on 1952, for which the weather may have been responsible, also, perhaps, increased private car and motor-coach travel. The £723,000 derived from railway ships is disappointing compared with £735,000 last year; holiday travel to the Continent and Ireland would account for its exceeding the £578,000 for Period 3.

London Transport total receipts for Period 4 were slightly down on last year. No doubt the weather at Easter was largely responsible; it seems to have affected bus and coach receipts, which, despite the traffic from the trams abolished during the past twelve months, were somewhat less than for the corresponding period of 1952. Insufficient detail is available to judge the effect of the fare changes operative from March of last year. Road passenger receipts, from the Commission's provincial and Scottish undertakings, seem to have been satisfactory, slightly exceeding last year's figure.

In view of the impending dissolution of the nationalised road haulage undertaking—or of a considerable part of it—the £5,850,000 receipts for Period 4 from British Road Services, which compare favourably with 1952 figure, are encouraging. This would seem to have been a satisfactory period for B.R.S., making allowances for Easter, as Period 3 receipts were £6,230,000.

The aggregates for the first sixteen weeks of 1953 are not very encouraging as regards British Railways. The 5 per cent rate increase of December 1 last are not reflected in a corresponding increase over 1952 in merchandise receipts, which only just exceed last year's figure. Passenger receipts barely held their own with 1952. Increased coal and steel output accounts for the rather more satisfactory coal and good mineral receipts; but the prospect of British Railways becoming mainly coal and mineral carriers is not cheerful.

PERCENTAGE VARIATION 1953 COMPARED WITH 1952

	Four weeks to April 19	Sixteen weeks to April 19
British Railways—		
Passengers	− 1·4	+ 2·2
Parcels	+ 7·3	+ 5·9
Merchandise & livestock	+ 2·5	+ 1·2
Minerals	+ 14·0	+ 9·6
Coal & coke	+ 7·8	+ 7·8
Total	+ 4·3	+ 4·6
C. & D. services	+ 1·9	+ 0·2
Ships	− 1·6	− 2·7
British Road Services	+ 1·0	− 0·1
Road Passenger Transport	+ 4·6	+ 6·7
London Transport—		
Railways	− 4·4	+ 4·1
Buses & coaches	− 0·3	+ 6·4
Trolleybuses & trams	− 10·3	− 4·6
Total	− 2·9	+ 4·1
Inland Waterways	0·6	+ 0·7
Aggregate	+ 2·9	+ 3·9

Summer Timetables, London Midland Region

THE summer timetables of the London Midland Region, operative from June 8, provide encouraging reading. They show an extensive paring of long-distance schedules, in a number of cases to times but little in excess of those which operated in 1939. Many trains have been put on to "Special Limit" timings, in some cases involving runs timed at from 58 to 61 m.p.h., start to stop.

One of the most notable improvements is the restoration of the Birmingham 2-hr. service. The 12.50, 2.20, 5.50 ("Midlander") and 6.50 p.m. down are booked from Euston to Coventry, 95·0 miles, in 94 min. (60·6 m.p.h.), and reach Birmingham in 2 hr.; the fifth down 2-hr. train is a new 8.50 a.m. down (replacing the present Mondays only 8.20 a.m.), calling only at Watford and not at Coventry, and booked over the 95·5 miles from Watford to Birmingham in 94 min. (60·9 m.p.h.). The present 9.5 a.m., calling at Northampton instead of Blisworth, and accelerated 16 min. to that town, and 33 min. from there to Coventry and Birmingham, is slowed only 2 min. by this diversion. The up 2-hr. trains are the 8.30 and 11.30 a.m. (the latter the restored "Midlander"), 12.30 and 4.30 p.m. from Birmingham, with 95-min. bookings (59·4 m.p.h.) from Coventry to Euston; the 2.30 p.m., calling also at Rugby, runs the 82·6 miles from there in 84 min. (58·8 m.p.h.), and is allowed 125 min. from Birmingham to Euston.

Many of the principal trains between Euston, Liverpool, and Manchester in both directions will be accelerated. To Liverpool the new 8 a.m. from Euston will be cut 13 min. to 3¼ hr., running the 140·6 miles from Watford to Crewe in 143 min. (59·0 m.p.h.); the 10.30 a.m. "Manxman" is accelerated by 10 min. to 3 hr. 35 min. non-stop; the 12.30 p.m. "Red Rose" by 15 min. to 3½ hr. non-stop (55·3 m.p.h.); and the 6.10 p.m. "Merseyside Express" (previously 6.5 p.m.) by 5 min. to 3¼ hr. In the reverse direction the 2 p.m. "Manxman" will leave Liverpool at 2.10 p.m., and still reach Euston at 5.45 p.m. Other southbound accelerations are of the 8 a.m. from Blackpool,

to be due in Euston at 12.55 instead of 1.10 p.m., and the 7.30 a.m. from Holyhead, due 1.18 instead of 1.32 p.m. The latter will run the 140·6 miles from Crewe to Watford in 147 min. start to stop. The up "Welshman" is booked over the 133·6 miles from Stafford to Euston in 137 min. (58·5 m.p.h.), and arrives at 6.15 p.m., 10 min. earlier than last summer.

Manchester shares in the benefit from the acceleration of the 8 a.m. down, which is to reach London Road at 11.43 a.m., 15 min. earlier; the 9.45 a.m. "Comet" also is accelerated 15 min., and will take 3 hr. 40 min., while the 11.45 a.m. down will take 3¼ hr. instead of the present 3 hr. 55 min. The down "Mancunian" is still to be allowed 3½ hr. with a Wilmslow stop, but the up train, 9.45 a.m. from Manchester non-stop, will be in London in 3 hr. 20 min., at 1.5 p.m. The 8.20 a.m. from Manchester *via* Stoke is accelerated to an 84 min. run up from Rugby, and will arrive 7 min. earlier, at 12.48 p.m., while the 2.20 p.m. up will leave at 2.5 p.m., and also with an 84-min. run from Rugby will arrive at 5.54 p.m., 18 min. earlier.

On the West Coast main the principal acceleration (30 min. on last summer's times) is that of the "Royal Scot," timed to take 7½ hr. each way between Euston and Glasgow (prewar 7 hr.), with one stop only, outside Carlisle, to change engines. The down "Midday Scot" reverts to its 1.30 p.m. departure, and with 87 min. to Rugby and 80 min. for the 75·5 miles thence to Crewe all but achieves its total acceleration of 15 min. on this stretch; Glasgow is still reached at 9.35 p.m. The acceleration of the up "Midday Scot," however, is 5 min. only, for a London arrival at 9.55 p.m. (9.20 p.m. in 1939). The 40-min. acceleration of the previous 11.40 p.m. sleeping car express from Euston to Glasgow, effected in the early part of this year, is now permanent, with departure from London at 12.20 a.m., and arrival in Glasgow at 9.30 a.m.

The 10.10 a.m. from Euston to Glasgow will be accelerated 25 min., arriving at 6.37 p.m., and during the height of the season the Birmingham-Edinburgh section which last season was attached to it at Crewe is to run as a separate restaurant car train, arriving 47 min. earlier than last summer, at 6.6 p.m., but an acceleration of 4 min. only on present times. The Perth section of the present 10 a.m. "Royal Scot" will run as far as Carlisle attached to the 10.10 a.m. down Glasgow, and not separately at 10.20 a.m. from Euston, as last summer. Owing to the acceleration of the up "Royal Scot," the 9.30 a.m. from Glasgow to Birmingham is to follow the former, at 10.5 a.m. from Glasgow, and will reach Birmingham at 5.10 p.m., only 20 min. later. The 10.10 a.m. from Edinburgh, running independently throughout, will be into Birmingham by 4.38 p.m., an acceleration of no less than 57 min. on present times.

The hourly service between Liverpool Central and Manchester Central is being brought back to the prewar 45 min. for the 34·0 miles, including Farnworth and Warrington stops, an acceleration of 7 min. per train. The fastest train of the day will be the non-stop 10.5 a.m. from Manchester to Liverpool, in 39 min. There are to be some useful accelerations, also, of the through services between Liverpool, Manchester, and Newcastle, partly on London Midland and partly on North Eastern metals; the 4.15 p.m. from Newcastle to Liverpool Lime Street gains 27 min., and the 5 p.m. from Lime Street to Newcastle 23 min. Four trains now will have overall times of 124 to 130 min. between Liverpool Lime Street and Leeds. The smartening up of this service is complementary to the improvement of the Manchester-Leeds service by the ex-Lancashire & Yorkshire line that took place last year. One substantial improvement on the latter route is of the 6.30 p.m. from Liverpool Exchange to York, which is to omit most of its previous stops after Sowerby Bridge, and reach York at 9.47 instead of 10.15 p.m.

On the Midland Division the 8.50 a.m. from St. Pancras to Edinburgh is to start at 9 a.m., and to run the 41·8 miles from Luton to Kettering in 42 min. (59·7 m.p.h. start to stop), reaching Nottingham 2 min. later than now; the arrival at Leeds will be 3 min. earlier, and at Edinburgh it will be 7.14 p.m., 8 min. earlier. The 9.50 a.m. "Thames-Clyde Express" will start at 10 a.m., omit the Kettering stop and run to Leicester in 108 min., so being accelerated by 14 min. to Leicester, and by 19 min. to Sheffield; the time of 3 hr. 14 min. to Sheffield is the fastest since the war. But the Glasgow arrival is still 7.55 p.m., and the overall gain 10 min. only. The 10.15 a.m. down Manchester makes the Kettering stop instead, but will still reach Manchester at 2.33 p.m.

Letters to the Editor

Railway Training Centre in Pakistan

April 28

SIR,—In the absence abroad of the Executive Secretary, I am writing to let you know that our attention has been drawn to the information given in your issue of February 20 (page 204) concerning the opening of the Lahore Railway Training Centre.

We would like to point out that the establishment of this training centre is jointly sponsored by the Economic Commission for Asia & the Far East and the Technical Assistance Administration, which is financing this project.

The statement that the "Economic Commission for Asia and the Far East proposes to recruit Pakistani officers for a railway training centre which is being set up at Lahore" is not correct. In fact, applications for the posts of director and instructors have been invited on a world-wide basis.

Yours faithfully,

C. HART SCHAAF
Acting Executive Secretary

Economic Commission for Asia & the Far East,
Bangkok, Thailand

Western Region Train Numbering

April 21

SIR,—Could you tell me of what use, if any, is the Train Identification Number Scheme in use on the Western Region of British Railways. While the majority of trains running through the Bristol District which have numbers allotted, do indeed carry them, the usual offenders are the 11.25 a.m. Shrewsbury to Plymouth, 1.10 p.m. Plymouth to Bristol, 1.55 p.m. Bristol to London, and 7.15 p.m. Bristol to Shrewsbury, all of which have numbers allotted, but rarely if ever carry them.

I believe the main purpose behind the scheme is to assist signalmen and station staffs in identifying the train they are dealing with, and to ensure correct regulation of the working, but I have heard the view expressed by railway staff that the numbering scheme serves no useful purpose, especially during the winter months, and that the signalmen become accustomed to dealing with the same trains every day.

Yours faithfully,

P. A. LACEY

44, Nevil Road, Bishopston, Bristol, 7

[Our correspondent is correct in his assumption that the numbering of passenger trains is primarily intended as a ready means of identification to signalmen and station staffs. The train number is also used for passenger train advising and avoids the necessity of using the full description or title of the train in advices despatched. Despite the doubts said to be cast on the usefulness of the numbering system, especially during the winter months, it may be stated that the arrangement generally serves a most useful purpose and during adverse weather conditions, such as fog in a particular area when certain long-distance trains are running out of course, it is most helpful from the point of view of regulation with other similar head-coded trains, particularly at junction points. Standard instructions exist that engines must at all times carry the correct train number, where allocated, and it can only be concluded that the omissions to which our correspondent refers have been due to unavoidable out-of-course engine working—ED., *R.G.*]

THE SCRAP HEAP

Putting a Sock in It

Coin-in-the-slot machines in New York railway stations sell nylons for four quarters (the size of a shilling and equal to about 7s.). They tumble out of the slot in boxes the size of an English packet of 20 cigarettes.—*From the "Daily Express."*

Cause for Reflection

Every day the staff at Oxford Circus Tube Station polish a large round mirror in the booking hall.

Every day hundreds of women stop to straighten their hats, or repair their make-up, at the mirror.

But nobody knows why the mirror is there.

"It is something of a mystery," said a London Transport official. "There used to be a man who knew why it was put there, but he retired years ago."—*From "The Evening News."*

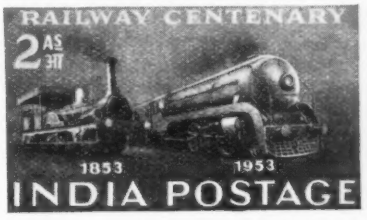
A Ruritania—Without Hope

The railway service between Southend and London was described in Southend as "the sort one would expect between two small towns in impoverished Ruritania." The words were those of Mr. King Hamilton, who applied before the Eastern Area Traffic Commissioners for a daily express coach service between Southend and London.

Mr. King Hamilton said that the present railway service was hopeless—because those who used it were literally without hope. Three main causes for complaint, he said, were regular unpunctuality at irregular times, regular overcrowding, and lack of comfort.—*From the "Evening Standard."*

Indian Railway Centenary Stamp

The special stamp reproduced below was issued by the Posts & Telegraphs Department of the Government of India on April 16, to commemorate the centenary of the opening of the first railway in India from Bombay to Thana. A cancellation stamp provided on April 16 depicts a "WP" class 4-6-2 locomotive with the postmark "New Delhi 16.4.1953."



Primrose Memorial

There has been a poor show this Spring of the primroses in the Surbiton railway cutting. . . . It is, or was, one of the very few railway cuttings in the South where primroses could always be expected in their season and is surely the most beautiful memorial of a railway manager ever produced by man and nature.

The primroses are the memorial of Sir Charles Scotter, for many years General Manager of the L.S.W.R. He planted them there, and after his death the primroses were looked after by the Surbiton stationmasters, but as the years went on they were left to the care of Mother Nature who now seems unaware of her responsibilities. All sensitive passengers on this brisk line hope that the railway authorities will tend and renew this sweet memorial.—*From "The Manchester Guardian."*

Hats Off

Another correspondent has written about the paragraphs in our March 13 and April 3 issues discussing the practice of railway staff removing their hats when passing through restaurant cars. He writes: "I cannot let the Dominion of Canada or the U.S.A. have the sole credit for the proper and reasonable practice of the removal of uniform or other hats in passing through dining cars. All guards, conductors, or other staff on the old L.N.W.R. were trained, if they needed it (which in the courtesy of those days was not often necessary) to pay that compliment as they passed through the cars on their lawful occasions . . . it is rather lamentable that the custom of this one company did not spread to others and remain with us."

Trunk Line Crossing

Photo] ["*Hull Daily Mail*"

Spotters' attention diverted from rail to road by 16 circus elephants filing across Anlaby Road level crossing, Hull

Round the Station

"Pied Piper" Specials

The badged and blazened hordes pour in,
The station shudders with the din,
As from the vaulted roofs rebound
The deafening decibels of sound;
The station's own familiar noise
Fights losing battles with the boys.

Their pig-tailed sisters, more sedate,
Are rather apt to congregate
In quiet corners, where the dears
Can shed their last nostalgic tears.
Embarrassed parents, standing by,
Already scenting liberty,
Think of the far-off days when they
Passed on this penitential way.

There goes the guard's insistent blast,
The Piper calls—they're off at last.
A few brief weeks of sun and rain
And they will all be back again.

But time, with unrelenting call,
Demands "last term" from one and all
And youth, that ripens into age,
Must venture on a vaster stage.

Yet some mysterious alchemy
Perpetuates posterity—
Long after our brief day is done
"Pied Piper" specials still will run.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

WESTERN AUSTRALIA

Distribution of Small Consignments

The loss of wagon user on branch lines with infrequent services has caused the railways concern, particularly in recent years, when shortage of wagons has prevented acceptance of all the traffic offering. Wagons for branch lines often contain goods for more than one siding, necessitating detaching the wagon at one or more sidings; to be removed the empty vehicle must await a later train. This causes delay not only to the wagon itself but to the trains concerned in attaching and detaching.

The Commission obtained Government approval for the purchase of road motor vehicles, to be placed at junctions where small consignments could be offloaded and distributed to nearby centres by road, thus releasing the wagon to the general pool.

As an experiment, road vehicles were placed at the important junctions of Narrogin, Katanning, Merredin and Northam, and the results achieved so far have more than justified the trial. Substantial savings in wagon days have been made, and earlier delivery of goods to destinations on branch lines has been made possible. It is proposed to extend this system of delivery, as opportunity offers, to other points on the railway where the advantages of the scheme are apparent.

CANADA

Labrador Railway Progress

The first ore from the Quebec-Labrador iron development should begin to be exported in August, 1954, when the Quebec North Shore & Labrador Railway is expected to be completed. Some 2,000,000 to 3,000,000 tons should be the output in 1955, increasing gradually to 10,000,000 tons annually. Most of the ore will go to the Pittsburgh region of the United States. It will go by the eastern seaboard to begin with, but if the St. Lawrence seaway is constructed it could go to Lake Erie ports.

The railway is now at Mile 133 of its 360-mile length. Construction is expected to average one-and-half miles a day in the summer months and steel is already being laid.

UNITED STATES

Portable Coach-Washing Plants

On some of the lengthier main lines, to maintain the smart external appearance of their trains the railways find it desirable not only to wash them at the terminals, but also while they are *en route*. The Atchison, Topeka & Santa Fe has installed at Albuquerque, New Mexico, a portable coach-washing plant. Trains can be washed while they are standing, or drawn past the plant for washing at 2 to 3 m.p.h., an operation which with a 15-coach train takes 5 to 7 min.

The Albuquerque plant consists of two washers, one for each side of the train. Each is carried on a self-propelled truck of 4,000 lb. carrying capacity, on which a washer is mounted, supplied from a 250 gal. water-tank, and equipped with a high speed 9 h.p. petrol engine for operating the washing fluid and water pumps. The fluid pump delivers oil to the 9 ft. revolving brush, and the water pump delivers water at sufficient pressure and volume thoroughly to wet the car sides, and, after scrubbing, to rinse them well.

The truck and washer, with full tanks, weighs about 12,000 lb., and needs a concrete runway about 8 ft. wide for comfortable operation. Each pair of washers cleans about one hundred 85 ft. cars daily, and when the washers are not in action, the lift trucks can be used for other purposes. The advantage of this method is that the washer needs no fixed foundation or special drainage, and, moreover, that it can be moved from one station to another should another washing centre prove more convenient from the operating point of view.

MOROCCO

New Works

Work on installations at Casablanca includes provision, in the construction of a new road bridge, for quadrupling in connection with the extension of the Roches Noires Station; also doubling between Casablanca and Nouasseur, some 20 miles, more than half of which has been completed. The railway hotels at Marrakesh and Oujda (the latter managed by the Wagons-Lits Company) have been and are being enlarged and improved.

Diesel Motive Power

Besides the three 1,500-h.p. Baldwin diesel-electric passenger locomotives placed in service last year, delivery of ten 200-h.p. shunting locomotives is expected.

BRAZIL

Presidential References to Railways

The President, in his message to Congress, read at the opening of the new legislative session in March, referred to the work of the Brazil-U.S. Commission in 1952. By December 31 some 23 railway improvement projects had been completed, entailing loans from the Washington banks of U.S. $155,000,000 and an expenditure in cruzeiros equivalent to £170 million.

Three loans, totalling U.S. $30,294,000, and a local expenditure of £33,183,000, had been approved. The three projects thus financed deal with the broad gauge network—part of the Central, Paulista and Santos-Jundiahy—which carries 35 per cent of the nation's railway traffic. The improvements planned will enable these lines to carry more than twice the traffic handled in 1951. It is estimated that within the next five years the national system will receive 700,000 tons of new rails, 6,000,000 sleepers, 15,000,000 cu. in. of stone, 600 coaches, 15,000 wagons, and 250 locomotives, besides workshop and other materials.

VENEZUELA

Barquisimeto-Puerto Cabello Line

Three Venezuelan groups, Empresas Venezolanas, Consorcio Unido Ferrocarrilero, and Contratistas Generales Asociados, have offered their services to the Venezuelan State Railways for

International Train in Mozambique

Photo] [F. H. Worsfold

Baldwin-built coal-burning 4-6-2 locomotive, Caminhos de Ferro de Mozambique, at Machava on international train from Lourenço Marques to Pretoria

the construction of a railway between Barquisimeto and Puerto Cabello. This line, in which it was reported in our March 20 issue that a United States firm was interested, is the first section of the projected national railways plan. It is to be 117 miles long, on the standard gauge, and will cost approximately 45,000,000 bolivares (U.S. $13,500,000). The contract will include also bridges and stations.

The railway is to cross sparsely populated but fertile regions suitable for tropical crops when properly irrigated. Colonisation of these districts has been retarded by the lack of communications and it is hoped that development will follow the construction of this railway.

GREECE

State Railways in 1952

Receipts for the first eleven months of 1952 at 166,000 million drachmae compare with 133,000 million the previous year, with increases in both passenger and goods traffics, in the latter case of over 33 per cent.; for 1952, receipts were derived almost exactly equally from passengers and goods. Reduced activity in execution of hydro-electric projects and in industrial output was offset by increased agricultural production and exports of cotton and mineral products.

Expenditure for the corresponding period of 1952 was 243,000 million drachmae, some 14 per cent more than a year before, for which higher prices and wage increases were responsible. The deficit has been made good by the Government.

Locomotive and Rolling Stock Orders

Twenty heavy goods locomotives have been ordered from Italian and 135 wagons for transport of lignite from German builders.

Franco-Hellenic Railway

The year 1952 was fairly good for the Franco-Hellenic Railway, though a drought reduced agricultural traffic. A balance between receipts and expenditure was maintained largely with the aid of transit traffic between Europe and countries in Central and Western Europe. In March the railway began to participate in the Jugoslavia-Greece tariff union for traffic with Turkey in transit through Jugoslavia and Greece *via* Salonica and Adrianople.

ITALY

Air Competition for Fruit Traffic

Faster train services and improved rolling stock including refrigerator wagons are reported to have bettered the position of the Italian State and foreign railways concerned in transport of fruit exports from Italy in competition with air services. Besides the difficulty of reducing air rates to a level competitive with railway rates there is the problem of finding aircraft during the Italian fruit season.

FRANCE

Rail-Road Trailers

The S.N.C.F. has encouraged in recent years the use of rail-road trailers, considered to be the most economic form of transport for goods over distances greater than approximately 150 miles. The avoidance of transhipment ensures rapid, claim-free transit and the S.N.C.F. has been granted authority by the Minister of Public Works & Transport to participate financially in the development of this form of transport by long-distance road transport undertakings.

In 1948, traffic moving in rail-road trailers reached 90,000 *tonnes*; by 1951 this figure had grown to 130,000 *tonnes*, whilst in 1952 nearly 300,000 *tonnes* of freight were carried in this way.

Road Signals at Crossings

Automatic road signals were installed at 200 level crossings in 1952.

Publications Received

The Steam Locomotive in America: Its Development in the Twentieth Century. By Alfred W. Bruce. New York: Norton & Company. London: George Allen & Unwin, Ltd., Ruskin House, 40, Museum Street, W.C.1. 9½ in. × 6 in. × 1½ in. 443 pp. Illustrated. Price $7·50 (45s.).—In this publication the author gives the engineering history of the American steam locomotive throughout the period of its greatest evolution. The book, which is based on the author's 45 years of experience in the locomotive building industry, surveys the steam locomotive during the nineteenth century and gives a resumé of the locomotive building industry at the turn of the century. The subjects include the development of American locomotive boilers, fireboxes, frames and mechanical stokers, and the author indicates the growth and development of locomotives during the twentieth century. The book is fully illustrated with line drawings and charts and contains some 180 half-tones.

Central Railway: The Pioneer Line of India. Issued by the Central Railway of India, Victoria Terminus, Bombay. No price stated.—The inauguration of railways in India by the opening in April, 1853, of the first section of the Great Indian Peninsula (now part of the Central) Railway from Bombay to Thana was referred to in our issue of March 20, largely devoted to this centenary, and in that of April 24, in an account of a recent G.I.P. Officers' reunion dinner. This 24-page, illustrated souvenir booklet contains congratulatory messages on the occasion of the centenary from Dr. Rajendra Prasad, President of India; Mr. Jawaharlal Nehru, Prime Minister, Mr. F. C. Badhwar, Chairman of the Indian Railway Board; and others. Short accounts are given of the early history of the G.I.P.R. and of the way in which that railway continued in later years as a pioneer—as in electrification and vacuum fitting of all stock. There are also some facts and statistics with particulars of places of interest served and a list of G.I.P. and Central Railway Agents and General Managers.

Meehanite Metal.—The International Metal Co. Ltd. has recently issued a buyer's guide which includes a number of illustrations showing several typical uses of the material. Also included is a list of Meehanite licensees both home and abroad, together with a list of engineering firms licensed to manufacture this material for their own individual products. A list of technical articles published on the characteristics of Meehanite is also included.

Aluminium Development Association Directory of Members. — The Aluminium Development Association has published a directory giving the names of the Members of the Council, a brief statement of the constitution and objects of the Association, and the names, addresses and other particulars of its member companies, including, where applicable, associate or subsidiary companies. In each case a short description is given of the activities and products of the company. By means of an index of products classified under "aluminium" and "aluminium alloys," readers are referred to all member companies producing any particular product.

Salamander Crucibles and Accessories.—Details of a wide range of Salamander crucibles, linings, basins, retorts, and other foundry accessories are contained in an illustrated booklet issued by Morgan Crucible Co. Ltd. Several types, grades, and shapes of Salamander crucibles are available for non-ferrous, cast-iron, aluminium, stainless steel and other alloys. The booklet, whose text is in English, French, German, and Spanish, shows how the properties of Salamander material, notably durability, thermal conductivity, elasticity, and resistance to fuel slags and flux attack, have been used to serve the metal industry.

E.S.C. Automatic Couplers.—A descriptive booklet dealing with the salient features of different designs of automatic couplers has been issued by the English Steel Corporation Limited. The automatic couplers are designed to suit all types of locomotives, carriages and wagons from locomotives of the highest tractive effort to the smaller designs used in quarry and coal mining, as well as mine cars and tubs. Designs are also available for use during the transition period where standardisation of coupler equipment is envisaged. The various types are illustrated by diagrams and include drawgear with rubber cushion and steel spring control.

Radio Services of London Transport

Network providing contact between headquarters offices and engineers on breakdown or repair work

SOON after the recent war the Signal Engineer's Department of the London Transport Executive began to use V.H.F. radio for some of its own purposes. Since August 30, 1950, it has operated, among other facilities, a regular communications service by means of which its own engineers and those of the Chief Mechanical Engineer's Department can keep in contact with their headquarters while travelling to the scene of a breakdown or other mishap, and when working at the scene of the occurrence.

The service used by the railway breakdown organisation operates through a transmitting station at the Executive's headquarters, 55, Broadway, and four receivers at Hounslow, Northwood, South Woodford, and near New Cross. Through these installations communication is provided between Earls Court and the breakdown lorries, which are equipped with transmitter/receivers.

Walkie-talkie radio equipment is used for local communication with the breakdown lorry at the scene of work. These arrangements are shown in the accompanying diagram.

Messages coming in over the radio link can be switched on to the London Transport telephone system by the Report Centre operator after dialling the number required. For working to and from the Report Centre itself, no manipulation is necessary apart from operating a send/receive switch on the apparatus.

Two 100 W. transmitters with crystal control and amplitude modulation are installed at 55, Broadway, and are remote-controlled from the Earls Court Report Centre. One transmitter is a standby. Their range is some 15 miles, but satisfactory working has been carried out at 25 miles, and, conversely, screening by topographical or other features may interfere at much smaller ranges. Such difficulties can usually be overcome by shifting the mobile station a short distance.

The outputs from all four fixed receivers are connected through a muting circuit to a common loudspeaker in a control panel at the Report Centre. There is also a direct connection from each receiver land line to an individual loudspeaker, so that signals can still be heard even if none is strong enough to overcome the muting of the local amplifier.

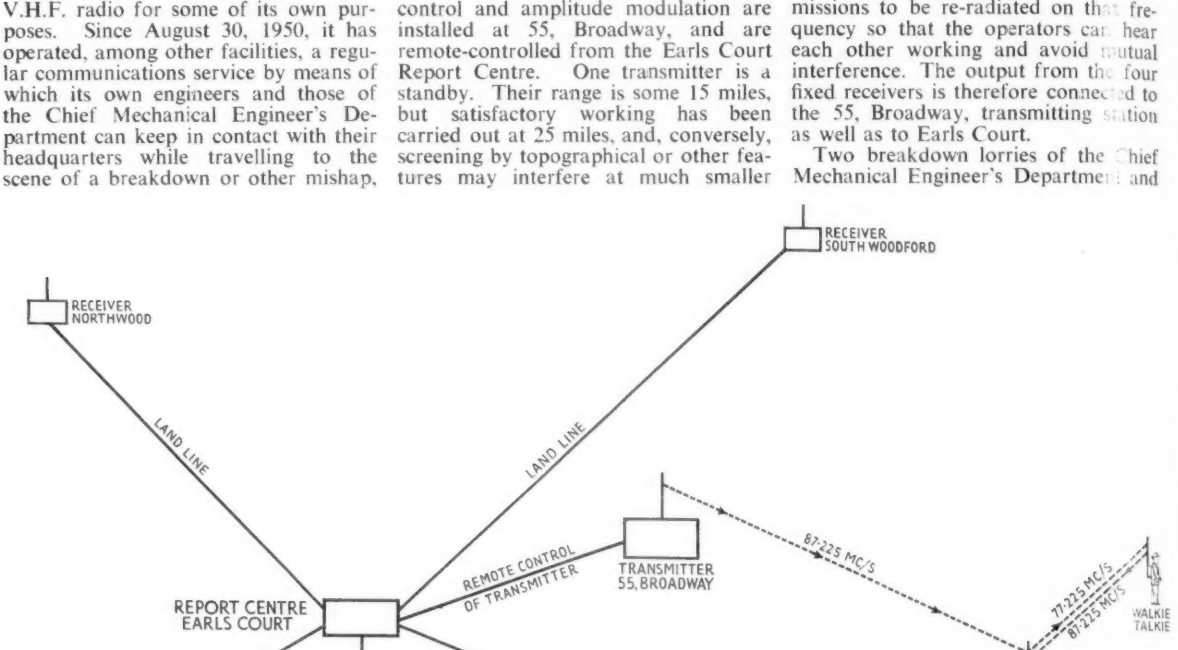
The receivers are unattended, and are housed in steel cases alongside the railway or elsewhere on the Executive's property. A mast some 25 ft. high is erected adjacent to each to support the aerial system.

The fixed station transmits on 87·225 Mc/s, and the mobile units reply on 77.275 Mc/s. Their signals are picked up by one or more of the receivers, and thence fed by telephone line to the Report Centre at Earls Court.

As the mobile station receivers are tuned to the main transmitter frequency, it is necessary for their own transmissions to be re-radiated on that frequency so that the operators can hear each other working and avoid mutual interference. The output from the four fixed receivers is therefore connected to the 55, Broadway, transmitting station as well as to Earls Court.

Two breakdown lorries of the Chief Mechanical Engineer's Department and one belonging to the Signal Engineer are equipped with 15 W. transmitter/receivers, incorporating rotary-transformers operated from a 12 V. accumulator independent of the normal electrical supply in the vehicle. The receivers are switched on as soon as a lorry is ordered on to the road so that instructions can be given while it is on the way to the occurrence, and if necessary a vehicle can be diverted to deal with a more urgent situation elsewhere.

After arrival at site all messages are passed through the Signal Engineer's lorry. This vehicle carries a walkie-talkie set which can be set up wherever required at the scene of the work to provide a link with the parked vehicle. The latter therefore can be placed in a position where screening or interference do not interrupt communication with Earls Court. Power for operating the walkie-talkie is supplied by a 2 V. accumulator, H.T. being taken from a vibrator.



Communications facilities between the Earls Court report centre and breakdown vehicles by means of V.H.F. radio and land line connections from dispersed receivers

The foregoing communications system was planned and the equipment installed by the Signal Engineer's Department, London Transport Executive. Pye Radio Limited supplied the fixed station transmitters and receivers and the vehicle transmitter / receivers. The walkie-talkie is a Marconi equipment.

In addition to the breakdown lorries, some inspectors' vehicles of the Signal Engineer's Department are equipped with 5 W. Pye transmitter/receivers. Their apparatus is switched on when the vehicles are making their normal rounds. Additional generators have been fitted to the engines of these vans for maintaining the charge of the radio batteries.

A separate fixed transmitter working on 78·74 Mc/s. is used for the Signal Engineer's own departmental services. Radio has been found invaluable when testing railway signalling installations, by providing contact between signalboxes and the locations of apparatus on the track. Two 12 W. battery-operated Pye transportable transmitter/receivers and two Teleradio walkie-talkies are available for work of this kind. Mobile point-to-point working is also used by the road transport services of the Executive for control of vehicles at race meetings and other events where it is necessary to be able to direct buses or coaches from a park to particular passenger loading points. These services are operated by two Pye 15 W. transportable sets in conjunction with Marconi walkie-talkies, and use frequencies of 87·275 and 77·275 Mc/s.

Much useful information on V.H.F. characteristics is gathered in the course of operating services of the types described in this article. On open sections of line the screening effect of cuttings and overbridges is pronounced, and experience is acquired in selecting sites for mobile stations from which communication will be satisfactory. It is often found, for example, that when signals are screened by a hill, it may not be necessary for the radio vehicle to go right to the top or beyond, but that results will be satisfactory from a site half way up.

Good results have been obtained in point-to-point working through tube tunnels over distances of about a mile, and over shorter ranges tunnel-to-surface communication has been possible.

New Missouri River Bridge

An improved steel shuttering was used for the 33 r.c. piers with semi-circular ends and a tapering batter all round

THE main line of the Chicago, Milwaukee, St. Paul & Pacific Railroad crosses the Missouri River near Chamberlain in South Dakota. As the site of the present bridge and its approaches will be inundated when the Fort Randall dam is completed by the U.S. Corps of Engineers, a new bridge is being built, also by the Corps, some 9,000 ft. downstream from the old one.

The new structure has two abutments and 33 piers of different heights between 68 ft. and 151 ft., built in reinforced concrete with a tapering batter all round including the semi-circular ends. With so much repetitive work it was obviously desirable to use steel shuttering if possible, but hitherto the Corps of Engineers has considered that such shuttering tends to bulge after repeated use. A more rigid type was designed and used on the Santa Fe Railway with success. As further improved, it is now reported as being extremely rigid and capable of standing up to multiple reuse with vibrated concrete, and so is being used for the Missouri River bridge.

Of the 33 piers, four are being built on caissons in water, 20 are carried on H-section pile foundations, and the remainder are founded on and keyed into chalk. The bearing piles are from 55 ft. to 90 ft. in length and are being driven with a pneumatic driver which is free from boiler and frozen pipe-line troubles.

The shuttering is of $\frac{3}{16}$ in. steel sheet with ribs round the circumference of the ends. The straight sides have 5-in. horizontal channel stiffeners and double 5-in. vertical channels as walls. Williams Super-Hi Tensile type clamps are used and only three rows of high-tensile $\frac{5}{8}$ in. steel ties are required. These are fixed just above the concrete as it is poured, and, as they cause practically no obstruction, the concrete bucket can be lowered anywhere inside the shuttering, and the concrete can be placed without tremies. This makes for great economy and also tends to eliminate honeycombing.

The pier shafts rest on massive concrete capping slabs over the piles, and the shaft concrete was poured in two lifts. The reinforcement was assembled on the ground and placed in position with the aid of a long-jib crane, which was also used for hoisting the large sections of the shuttering. After the first lift had been poured and had set, the shuttering was released for use on another pier by unbolting the ties and the bolts securing the ends to the side sections; shuttering for the second lift was then placed in position, and curing with perforated water hose-pipes began immediately.

SCOTTISH REGION FIREFIGHTING COMPETITION.—The annual competition for the British Railways, Scottish Region, Challenge Shields for efficiency in firefighting drill was held on April 22 at the North West Station of Glasgow Fire Brigade. In the hydrant contest, in which seven teams competed, Edinburgh Haymarket Motive Power Depot won the major award for the third year in succession with St. Rollox Works No. 1 taking second place. Three teams competed in the trailer pump exercise, which was won by Cowlairs Works, with Edinburgh Waverley C. & W. team closely behind.

RESIGNALLING AT NEWCASTLE CENTRAL, N.E. REGION.—A further step in the resignalling of Newcastle Central Station was taken on May 3, when the Castle signal gantry at the north end of the station, carrying semaphore signals, was replaced by a new gantry with colour-light signals. Services alterations necessitated by this and associated work included the replacement of South Tyneside electric trains by steam trains which were diverted to arrive at Newcastle *via* the King Edward Bridge. Consequently the rail service *via* Gateshead East was withdrawn and the trains booked to call there called instead at Felling, where special road services were operated to and from Gateshead.

PLAISTOW GOODS STATION CLOSED.—The former L.M.S.R. goods station at Riles Road, Plaistow, E., was closed on May 1. The Eastern Region states that facilities are available at Plaistow & West Ham Goods Station.

EASTERN REGION AMBULANCE COMPETITION.—The finals of the Eastern Region Men's Ambulance First Aid Competitions were held on April 17 at the Bishopsgate Institute, London, E.C.2. Seven teams from various parts of the Eastern Region competed and the winner of the competition was the Kings Cross Motive Power Depot team, obtaining 468½ marks out of a possible 500. The Worksop (Notts) team gained second place with 428½ marks. The Chief Regional Officer, Mr. C. K. Bird, and Mrs. Bird presented a trophy, the Eastern Region Bowl, and prizes to the winning team. Prizes were also presented to the second and third teams. The winning team will now represent the Region at the Inter-Regional Trials on May 21.

CATHODIC PROTECTION DEVELOPMENT.—F. A. Hughes & Co. Ltd. and the Westinghouse Brake & Signal Co. Ltd., are collaborating and pooling their respective experience of cathodic protection for corrosion prevention with the object of offering their combined technique in the practical and comprehensive form now known as The Guardion Service. This embraces the supply of Guardion and Westalite cathodic protection equipment, and offers full consultative and design facilities as well as surveys in the field. It is applicable to all forms of buried or water-immersed metallic structures. Full particulars can be obtained from F. A. Hughes & Co. Ltd., Cathodic Protection Division, Bath House, 82 Piccadilly, W.1.

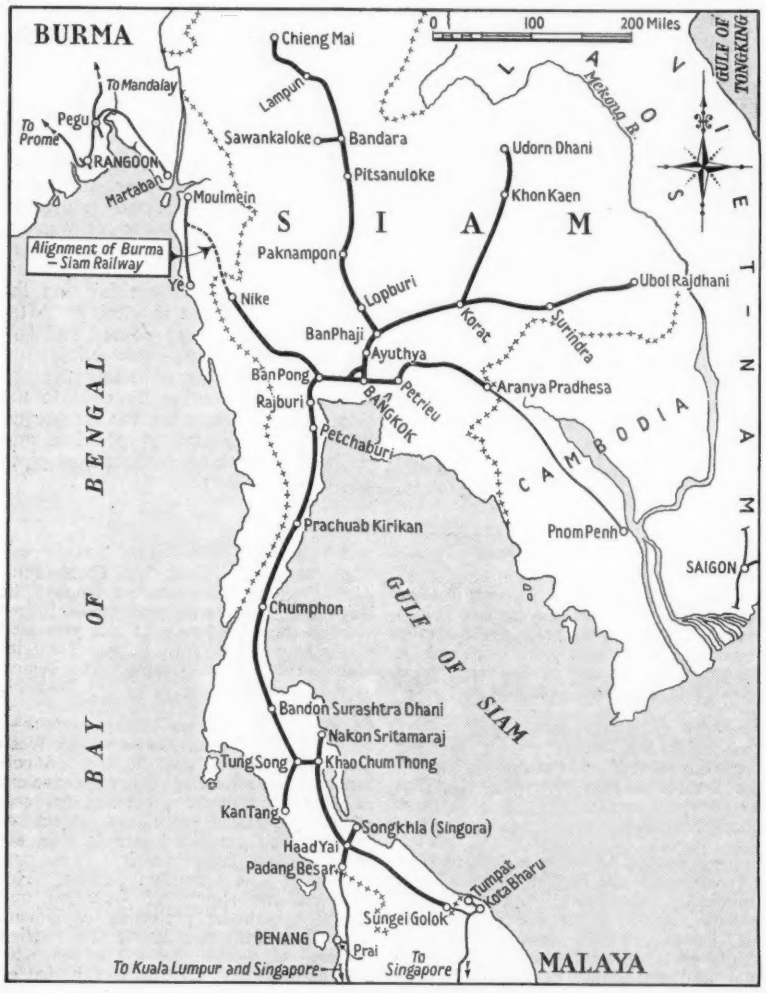
State Railways of Thailand

Construction of new lines: successful dieselisation of passenger services

THE first railway in Thailand was a private line from Bangkok to Paknam, 13 miles, begun in 1891, and opened in 1893; this line forms the electrified portion of the present State system and can better be described as a tramway; it was purchased by the Government in 1936. Work on the first Government line, northwards from Bangkok *via* Ayuthya, began in 1892. In March, 1897, King Chulalongkorn opened the section from Bangkok to Ayuthya, and the line reached Nakorn Ratsima (Korat) in 1900. The total mileage is some 2,050 (open line) with 200 miles under construction.

All the earlier State lines were laid to 4-ft. 8½-in. gauge, but the construction of the Southern main line from 1900 onwards inaugurated the metre-gauge system, for it was intended that this line should eventually be linked with the metre-gauge railways of Malaya and Burma. Conversion of the Northern and Eastern lines was decided on in 1919, and by 1930 all lines were metre gauge.

The Southern main line reached the Malaya frontier at Padang Besar, on the line to Penang and Singapore, in 1918, and at Sungei Golok, on the Kelantan line, in 1921. The present northern terminus at Chieng Mai was opened in 1922, though Pitsanuloke, half-way, was reached as long ago as 1908. The 193-mile line from Korat to Ubol Rajdhani was completed in 1930 and the North Eastern extension from Korat to Udorn, 190 miles, in 1931-41. The Burma-Siam railway, built under Japanese occupation during the last war, has been abandoned where it runs over the Burma border beyond Nike.



Thailand railways in relation to neighbouring countries, showing through connections with Malayan Railway

The system radiates from Bangkok, and there is no instance of a cross-country line connecting two branches. The traffic is mainly agricultural, paddy and milled rice and its by-products. All the steam locomotives burn wood; diesel-electric locomotives were successfully introduced some years ago, and work most of the express traffic on the Northern and Southern main lines, besides some trains in the Bangkok district.

Major Works

Among the notable major works are the Rama VI Bridge, 1,500 ft. long, over the Chow Phya River at Bangkok, the longest in Thailand. Its completion linked the former separate Northern and Southern systems and allowed all rolling stock to be repaired at the Makkasan shops, besides giving passenger traffic from and to the south access to Bangkok Station instead of Bangkok Noi, the other side of the river. The contract was awarded to Les Etablissements Daydé, of Paris, with a Thai engineer in charge throughout of the survey and construction of the bridge.

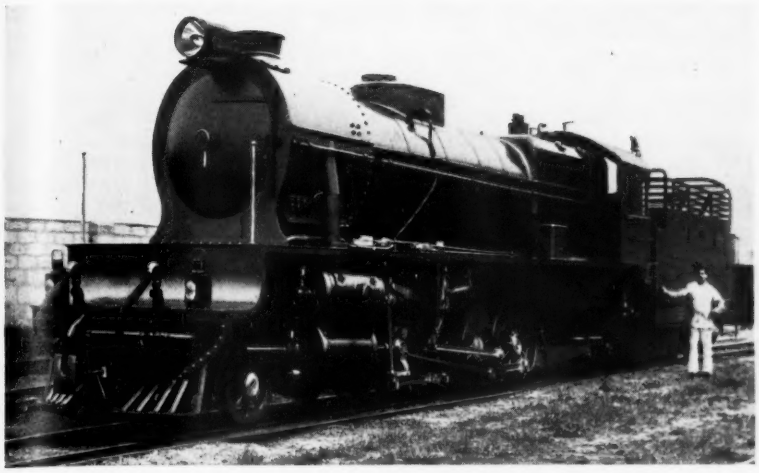
Work began in December, 1922, and took some four years to complete. The bridge is of the cantilever type. There are five spans, the centre span being 390 ft. long with two cantilever arms each 135 ft. and a simple suspended truss 120 ft. long in the centre.

The longest tunnel in Thailand is the (single line) Khun-Tal, at mile 423 on the Northern line, 1,490 yd. long. Construction began in 1907, and took eleven years. The tunnel was built for 4-ft. 8½-in. gauge, and since the change-over to metre gauge the large diameter gives good ventilation and lessens air resistance to trains.

Changes in Organisation

Until 1950 the railway budget was not kept separate from that of the State, and any profits were credited to the State Exchequer. After establishment of a constitutional monarchy in 1932, the State Railway was at first administered by a board of Railway Commissioners, whose fifteen members included *ex-officio* the Minister of Economic Affairs and the Commissioner-General of Railways. In 1935, the status of the Railway Commissioners was altered to that of a consultative committee, which was effective up to June, 1951.

The State Railway of Thailand Act of 1951 provided for autonomy of the system as from July 1 of that year. An independent organisation, the State Railway, took over the responsibilities of the State Railway Department. The Act provided for appointment by the



2-8-2 *type heavy freight and mixed traffic locomotive built by Batignolles-Châtillon in* 1924

Council of Ministers of a Board of Commissioners; the Board consists of a chairman and six members, one of whom is the Director General.

New Construction

Lines under construction or planned include branches from Pitsanuloke, on the Northern line, to Mesod on the Burma frontier; and from Udorn, present terminus of the North Eastern extension, to Nong Kai on the right bank of the Mekong River, which here forms the frontier with Laos; the latter line should tap much water-borne traffic from the Mekong. Another line 200 miles long is planned from Pitsanuloke to the Mekong at Nakorn Panom. In addition, the Ban Phaji to Lopburi section, 26 miles, is being doubled.

Steam Locomotives

The history of steam motive power on the railways of Siam is complicated by there having been two gauges. On conversion of all lines to metre gauge, the number of locomotives built for this gauge was too small to deal with traffic, and these were of insufficient power.

Certain of the 4-ft. 8½-in. gauge engines were adapted to metre gauge. The number of locomotives of different designs by different builders in Britain, U.S.A., and various Continental countries led the State Railways to adopt fairly rigid standardisation.

The four main types of modern steam motive power are: (*a*) 4-6-2, for fast passenger and light mixed trains in flat districts; (*b*) 2-8-2, for heavy freight and mixed trains on all lines and heavy mixed and steeply graded sections; (*c*) 2-8-0, for freight and mixed trains on steeply graded sections; and (*d*) Garratt 2-8-2+2-8-2 for freight services on steeply graded lines.

Many of these were built before the second world war. The Pacifics include the three-cylinder "260" class built by Hanomag, of Hanover, in 1928, and other engines of this class were supplied by Japanese builders in 1942-43 during the Japanese occupation. The "301" class of 2-8-2 locomotives includes those supplied in 1924 by Nasmyth Wilson and by Batignolles Châtillon in the same year; in the "351" class, with the same wheel arrangement, are a number of "MacArthurs," by Baldwin, supplied after the last war from Allied military surplus. The 2-8-0 engines of the "331" class were built by the Swiss Locomotive & Machine Works in 1926-27.

The Garratts, built in Germany in 1929 and 1933, are known as the "451" class; there are some differences between the two batches, the later having a larger grate area and heating surface and being equipped with the Nicholson thermic syphon, and weighing, at 133 tons, slightly more; coupled wheels in both batches are 3 ft. 5 in. dia. and tractive effort 42,000 lb.

Special shed and depot erected for diesel locomotives and railcars at Makkasan, near Bangkok

Sulzer 450-*h.p. diesel locomotive crossing viaduct on Northern line on* 1 *in* 45 *gradient*

Since the revival of the Japanese locomotive, carriage, and wagon building industries after the second world war, considerable quantities of steam locomotives and wagons have been delivered from Japan.

Dieselisation

In 1928, two 180-b.h.p. four-wheel diesel locomotives were placed in service; the engines and mechanical parts were supplied by the Swiss Locomotive Works. They were used on Bangkok suburban services. Motive power supplied in 1931-32 included six diesel-electric locomotives of the "551" class, by Frichs of Denmark; they are of the 2-Do-2 type, 500 b.h.p., weighing 190 tons, with four-cycle engines and solid injection, and have been used on the Bangkok-Penang international expresses. In 1931 six "501" class 450-b.h.p. diesel-electric locomotives of their own design were supplied by Sulzer for passenger and mixed train services. The "601" class 1,400-b.h.p. 2-Do-Do-2 diesel-electric locomotive by Frichs, placed in service in 1932, for heavy freight services on heavily graded sections, was at the time of construction among the most powerful metre-gauge diesel-electric locomotives in the world.

New Sulzer locomotives of 735 b.h.p. (1947 and 1950) and 960 b.h.p. (1951-52) are giving good performance. About three years ago orders were placed in U.S.A. for 45 diesel locomotives of 500 and 1,000 b.h.p. on a very short delivery promise; but serious difficulties arose and the greater part of the contract is understood to have been cancelled.

Despite considerable age all the original diesel locomotives, apart from a few war casualties, are understood to be giving good service; performance has been good, especially in view of maintenance difficulties.

Carriages and Wagons

Most of the coaching stock is bogie, of the centre corridor type with open end platforms, and has been supplied by British builders, who also built the Royal saloons. Expresses include restaurant cars and day-and-night coaches. The majority of the freight vehicles are four-wheel and of all-steel construction. The capacity of a bogie covered wagon is 26 tons and that of a four-wheel covered wagon 12 tons. A high proportion of goods stock is vacuum fitted, and much of the remainder is piped. Drawhook and centre buffer couplings are standard.

Stock recently consisted of 412 steam and 26 diesel locomotives, six diesel railcars, 600 passenger and 6,000 goods vehicles, and four 25-ton breakdown cranes.

Express Passenger Services

Principal express services are between Bangkok and Chieng Mai, Bangkok and Hua Hin, and Bangkok and Prai. The last-named is the Malayan Railway terminus on the mainland connected by a steamer with Penang (Georgetown) on the island of that name. Hua Hin is a seaside resort on the west coast of the Gulf of Siam. These three services normally are diesel worked. The international service to and from Prai *via* the frontier station of Padang Besar before the war covered the 700-odd miles, of which about 100 are in Malayan territory, in 26 hr.; at present, because of the destruction of the bridge at Surat Thani, in Thai territory, the weekly international passenger service takes some 48 hr., including transhipment across the river at Surat Thani.

Makkasan Workshops

The Central Workshops at Makkasan, near Bangkok, cover some 60 acres. They were taken into use in 1910, and have been enlarged and improved at intervals ever since, with addition of machine tools and other equipment. They were severely damaged by aerial bombardment during the war. Dieselisation in the 1930s resulted in revision of repair and maintenance arrangements in the locomotive shops. The capacity of the shop for general overhaul is 16 locomotives. The time taken to repair one locomotive is 80 eight-hour days, and repairing procedure is in 16 stages of five days each. The output is five locomotives a month (25 working days or 200 working hours).

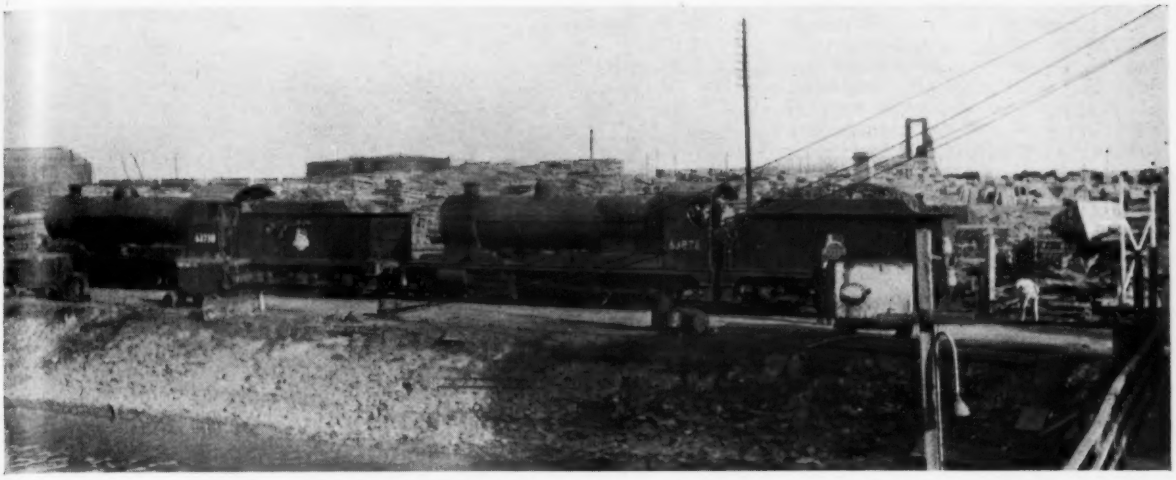
An Eastern Region "V2" at Highworth Junction

Photo] [*S. R. Watts*

Eastern Region "V2" class locomotive No. 60845 *hauling a* 20-*coach train* (610 *tons*) *on trial runs between Reading and Stoke Gifford after recent tests on the Swindon plant*

Ship Refloated with Aid of Locomotives

Overturned vessel at Immingham Docks righted by ropes hauled by two engines



Two "O.4" class locomotives and the truck (extreme right) on which was mounted the balance indicating the pull

THE Motive Power Department (Lincoln District) of the Eastern Region took a leading part in refloating s.s. *Hebble* at Immingham Docks on March 7. This ship and a lightship overturned in the dry dock of the Humber Graving Dock & Engineering Company works during the gales and floods on January 31. The water entering the dock after the bank of the Humber had been breached, knocked away the supports, and both vessels overturned and were submerged.

The plan for refloating the *Hebble* entailed welding four steel pillars to the side of the hull. To the tops of these were attached four steel ropes which then passed through a series of pulley blocks and were finally attached to one long steel rope which ran the full length of the graving dock, across the end, and thence to the sidings alongside the Immingham Dock.

Two "0.4" class engines from Immingham Depot were attached to the wire ropes, providing a pull of about six tons which could be applied smoothly and controlled. The passage of the wire rope through the series of pulleys resulted in a pull of some 84 tons at the ship end. To ensure control, a balance with a large dial indicating the pull was mounted on a small truck behind the tender of the first locomotive, one side being coupled to the tender drawhook and the other to the wire rope. Mirrors on the truck enabled the dial to be read from the footplate.

Walkie-Talkie Apparatus

A control centre was established on the roof of a low building near the bows of the *Hebble*. Both locomotives

(*Continued on page* 540)

Before starting to raise the "Hebble," showing the four steel pillars welded to the side of the hull

Hampstead Heath Station Reconstructed

Modernisation includes pre-stressed concrete platform awnings and up-to-date signs

THE reconstruction of the platforms and platform buildings of Hampstead Heath Station, on the North London line of the London Midland Region, has been completed. The work has included new awnings on both up and down platforms for approximately 200 ft. on each, electric lighting in place of gas, new waiting rooms and toilets, an auxiliary booking office just inside the entrance from South Hill Park, and modern signs and an improved advertising display.

The remodelled up platform, looking towards Richmond

Cantilever-Type Awnings

The new awnings are of cantilever type in pre-cast, pre-stressed concrete, were manufactured in the London Midland Region concrete depot at Newton Heath, Manchester, and erected by railway labour. The structure consists basically of cantilever frames at 12 ft. 9 in. centres supporting 3 in. thick pretensioned slabs spanning between them and arranged so as to give an unbroken soffit to the awning. The frames were assembled in two sections; the column members were concreted into sockets left in the previously prepared foundations and the beam members were temporarily supported by trestles from the platform until the roof slabs had been erected and the beams anchored to the tops of the columns. This was effected by site jacking the two cables which were left projecting from each column and threaded through coved holes in the beam. The cables were grouted and the recesses above the anchorage cones were made good with cement mortar on completion.

The columns are 1 ft. × 1 ft. 9 in. section at the base, increasing to 1 ft. × 2 ft. at the top and were lightly reinforced for handling, and 1½ in. dia. coved holes were provided for the two Freyssinet cables. The cantilever beams are of inverted T section with 6 in. thick web and 1 ft. wide × 3 in. thick flange. The depth is 6 in. at the end increasing to 2 ft. 3 in. at the haunch and they are each reinforced with one straight and one curved 12-wire Freyssinet cable, the latter being anchored on the soffit.

The 3 in. thick pre-tensioned slabs were made in 2 ft. 6 in. widths by the long line process and are reinforced with twenty 0·2-in. dia. high tensile wires. Longitudinally the frames are braced by ordinary reinforced concrete beams cast *in situ;* the continuity bars are threaded through coved holes left in the precast beam units.

Ship Refloated with Aid of Locomotives

(*Concluded from page* 539)

were obscured by other buildings, and accordingly were equipped with walkie-talkie.

After coupling up, the locomotives moved slowly forward until all slack in the wire ropes was taken up. Water was then admitted slowly into the dry dock and the locomotives continued to move forward slowly, exerting a steady pull.

Buoyancy Restored

As the ship moved over more water was let in, and by controlling the movement of the locomotives and the level of the water the ship gradually became more buoyant until she came over on her own and floated on an even keel.

The whole operation took about half-an-hour from the time the locomotives began to pull. The Humber Graving Dock & Engineering Company provided all communication equipment and gear, including that for controlling the ship once she was pulled over and righted herself.

WHEELERWEIGH AUTOMATIC WEIGHING EQUIPMENT.—The Wheelerweigh, recently exhibited at the British Industries Fair, Castle Bromwich, by Industrial Truck Development in association with Austin Crompton Parkinson Electric Vehicles Limited, is a precision weighing instrument for installation with the Stacatruc fork lift truck, on which, by simply depressing a small lever, the actual net weight of the load on the forks is instantly and clearly visible on a large dial. It is fully approved by the Board of Trade Standards Department, and should therefore satisfy the official regulations laid down by all national bodies governing the use of weighing machines for trading purposes. The equipment can be applied to either small or large Stacatrucs and calibrated up to full carrying capacity. The weighing equipment is locked until the operating lever is depressed, so that while the truck is in motion or handling loads which do not require to be weighed, the mechanism is relieved of all loads or shocks. The weight is shown on a large engine-divided dial. Readings can be in lb., kg., or to any standard of weight. The weight of pallets and so on can be instantly tared off, with the actual net load shown on the dial. The dial is illuminated when the weigher is in commission, and can be positioned either across the vehicle or arranged for side reading.

TOURIST TICKETS ON PARIS URBAN TRANSPORT.—Tourist (runabout) tickets costing £1 6s. each now can be obtained from French Railways Limited, 179, Piccadilly, W.1. They are available for unlimited travel during seven consecutive days on all lines operated by the Régie Autonome des Transports Parisiens (Métropolitain, the Ligne de Sceaux as far as Massy-Palaiseau, and bus routes) excluding the Service des Halles and the Services d'Excursions. They are available in first class on the Métro, and the Ligne de Sceaux.

Metre Gauge "YL" Class Locomotives for India

Designed for branch line working, and having a tractive effort of 13,700 lb. at 85 per cent boiler pressure

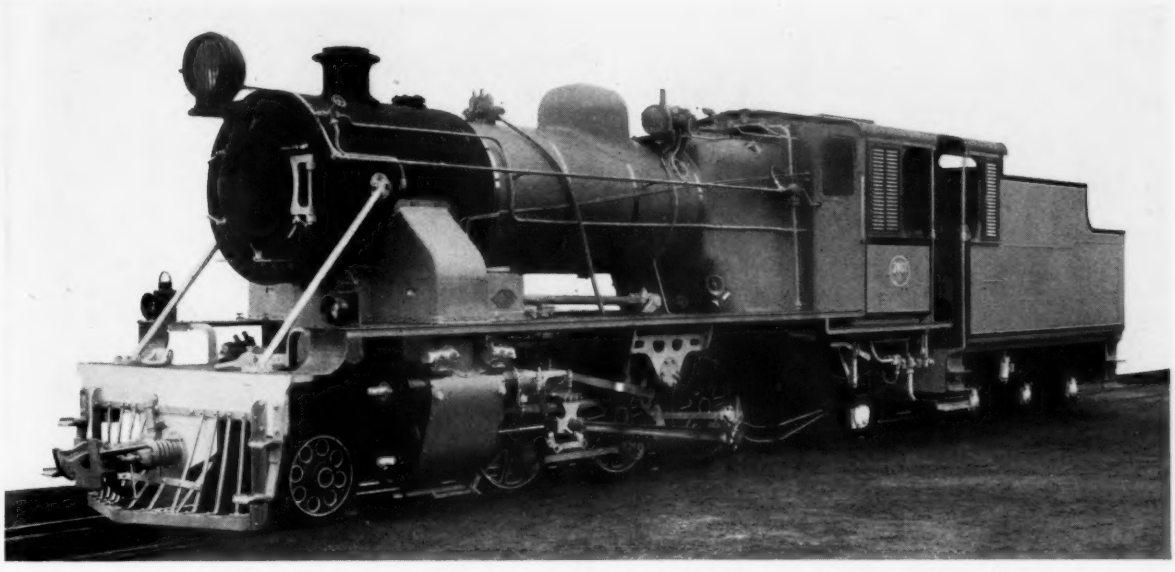
AMONG the locomotives recently completed by Robert Stephenson & Hawthorns Limited are ten "YL" class engines for India. Built to the requirements of the Central Standards Office, Government of India, the engines are primarily intended for service on branch lines laid with 41¼ lb. rails on which axleloads heavier than eight tons are now permitted.

Since the locomotives may, however, be required to operate on sections capable of taking axleloads of nine tons, provision has been made during design, especially in relation to the frames and other load-carrying parts, for the possible installation in India of side tanks of 700 gal. capacity. The following are the principal dimensions of the locomotives:—

Cylinder (2) dia. and stroke	...	12½ in. × 22 in.
Coupled wheels, dia.	...	3 ft. 7 in.
Front truck wheels, dia.	...	2 ft. 4½ in.
Hind " "	...	2 ft. 4½ in.
Heating surface—		
Total evaporative	...	524·6 sq. ft.
Superheater	...	130 sq. ft.
Total	...	654·6 sq. ft.
Grate area	...	17·75 sq. ft.
Working pressure	...	210 lb. per sq. in.
Tender—		
Water capacity	...	2,000 gal.
Coal capacity	...	4 tons
Wheels, dia.	...	2 ft. 4½ in.
Total weight, engine and tender in working order	...	63 tons 9 cwt.
Tractive effort at 85 per cent boiler pressure	...	13,700 lb.

The boiler barrel has a maximum diameter of 3 ft. 6½ in. and is 10 ft. between tubeplates. The superheater, supplied by the Superheater Co. Ltd., is fitted with "A" type elements. There are 13 large tubes 5¼ in. outside dia. 8 s.w.g. thick and 49 small tubes 2 in. outside dia. 11 s.w.g. The inner firebox is of steel and all-welded and the firebox wrapper is of Belpaire design.

Flexible stays are fitted in the breaking zones, and the four front rows of roof stays are also flexible. Two arch tubes 3 in. outside dia. by 7 s.w.g. thick are fitted in the firebox to suit standard I.R.S. arch bricks. Asbestos mattresses are fitted to the firebox back and also



Indian Government Railways "YL" class engine for branch line working

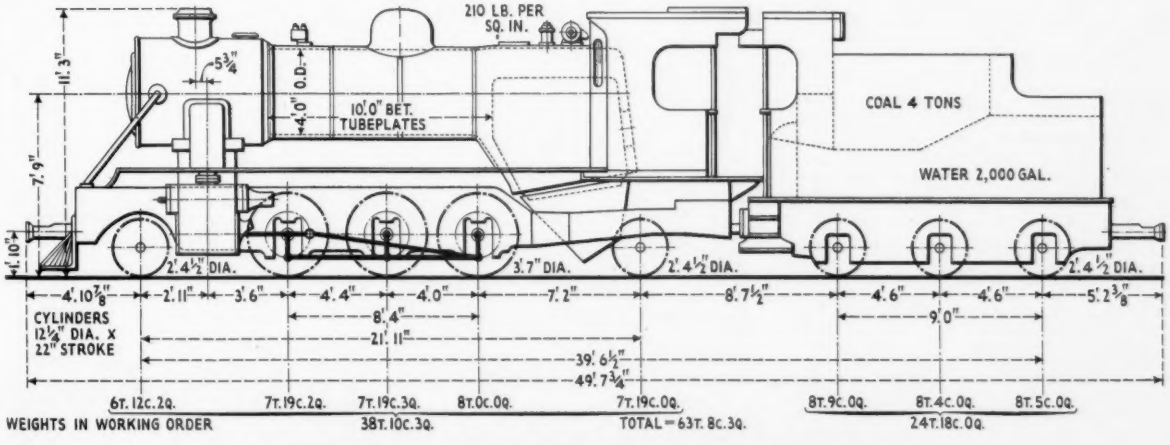


Diagram showing principal weights and dimensions of the locomotive

to the portion inside the cab. The smokebox is self-cleaning.

Two 2½ in. dia. Ross pop safety valves are fitted, also two Everlasting type blow-off cocks, one at the throat plate and one on the mud collector cover. The discharge ends of the pipes are provided with adaptors for connection to the boiler hot water washout plant installed in motive power depots. A steam manifold is fitted on the firebox crown outside the cab. Fittings include a Joco regulator; a Gresham & Craven No. 7 live steam injector is fitted.

A manually-operated rocking grate is provided, without drop grate. The ashpan is all-welded, of the hopper type. The upper portion is fitted to the foundation ring and the lower to the engine frame. The door is operated from the track by a spring-loaded lever which ensure tightness while running.

Engine Design

The engine frames are of plate, ¾ in. thick and in two parts, the front and hind portions being joined by a casting in front of the firebox. The front dragbox is a steel casting which also forms the buffer beam and truck centre. The frames are well braced and stayed by horizontal racking plates and vertical stretchers.

Cylinders are of cast iron with liners of a similar material, with a diameter and stroke of 12¼ in. by 22 in. NC bypass valves and relief valves are fitted and lubrication is provided by a Wakefield type AC lubricator with separate condenser providing two feeds, one to each main steam pipe. Paxton-Mitchell metallic packing is fitted.

Actuated by Walschaerts valve gear, the 8in. dia. piston valves are designed for a lead of 3/16 in., a steam lap of 1½ in., and an exhaust lap of ½ in., with ports 1½ in. wide. The valves are cast iron, of the plug type, with narrow rings.

The motion is designed to provide sufficient travel to attain a full gear cutoff of at least 75 per cent in fore and back gear. Motion pin holes have cast-iron bushes, lubricated by soft grease. The crossheads are of the Laird type and the piston rods are fitted to the piston by a double taper with gland type fixing.

The coupled wheels are of SCOA-P design supplied by K. & L. Steelfounders & Engineers Limited. The whole of the revolving weight and 40 per cent of the reciprocating weights are balanced, the latter being distributed over the coupled wheels; leading 13 per cent; intermediate 18 per cent and driving 9 per cent. AJAX hard grease lubrication is provided to the coupled axleboxes which are of solid bronze, and the horn faces oil lubricated. Skefko self-aligning roller bearings are fitted to the return cranks end of the eccentric rods, and floating bushes lubricated by hard grease are fitted to the coupling rods and connecting rod big ends.

Springing is compensated in two groups, the front truck and the leading coupled springs form one group, the intermediate, driving, and hind truck forming the other. The front and hind trucks are attached to radial arms with side control by helical springs. The weight on the trucks is transmitted through friction fabric liners mating with steel faces. No lubrication is provided. British Timken cannon type axleboxes are fitted to the front truck, while the hind truck has independent British Timken axleboxes carried in a cradle outside the wheels.

The tender underframe is of plate frame construction, the plates being ¾ in. thick; the frames are outside the wheels. British Timken D.I.B. type roller bearings are fitted, and the axlebox guides are of 11 to 14 per cent manganese steel. Provision is made for carrying 4 tons of coal and 2,000 gallons of water.

Vacuum braking is fitted to both engine and tender, a Gresham & Craven S.J. pattern, right-hand P type injector is fitted.

Electrical equipment includes a turbo-generator, type TGI, a Tonum E, 14 in. headlight and cab lighting supplied by J. Stone & Co. (Deptford) Ltd. The locomotives were built to the inspection of the Consulting Engineers, Messrs. Rendel, Palmer & Tritton. The following is a list of suppliers of equipment;—

Coupled wheels	K. & L. Steelfounders & Engineers Limited
Regulator	Wota Limited
Safety valves	R. L. Ross & Co. Ltd.
Blow-off cocks	Everlasting Valve Co. Ltd.
Superheater equipment ...	Superheater Co. Ltd.
Ajax lubricators	Whitelegg & Rogers Limited
Roller-bearing axleboxes ...	British Timken Limited
Fabric liners	Laycock Engineering Co. Ltd.
Couplers	A.B.C. Coupler & Engineering Co. Ltd.
By-pass valves	Wota Limited
Metallic packing	United States Metallic Packing Co. Ltd.
Eccentric crank bearings ...	Skefko Ball Bearing Co. Ltd.
Reversing screw bearings ...	Skefko Ball Bearing Co. Ltd.
Electrical equipment ...	J. Stone & Co. (Deptford) Ltd.
Injectors	Gresham & Craven Limited
Hydrostatic lubricator ...	C. C. Wakefield & Co. Ltd.
Vacuum brake equipment ...	Vacuum Brake Co. Ltd.

Portal Structure Repair

Straightened overnight after being struck by goods wagon

STRUCTURES built up of broad flange beams have been used by British Insulated Callender's Construction Co. Ltd. for over 30 years, as a standard form of support for overhead equipment for railway electrification, as they are simple, have great strength and are easy to maintain.

The illustration shows an upright member of a broad-flanged beam portal structure which was damaged by the full force of a goods wagon derailment near Goodmayes, on the Liverpool Street-Shenfield line, Eastern Region. The beam had been bent over at an angle of about 45 deg. but first aid repairs were made overnight by heating the beam at its base and bending it back into an upright position, so that the overhead conductors were quickly restored to their proper position and the service maintained.

Broad-flanged beam portal structure straightened by overnight repair after being struck by a goods wagon

It is unlikely that any other form of support could have sustained such a serious accident and still have been in a fit condition to be restored to service so quickly.

LEYLAND ASSOCIATE IN HOLLAND.—Leyland Holland N.V.i.o., the company recently created to handle sales and service for Leyland Motors Limited in the Netherlands, has moved from its temporary address, c/o Kromhout Motorenfabriek, Motorkade 10, Amsterdam, to its own premises at Meeuwenlaan 90, Amsterdam N.

FIRE BRIGADE COMPETITION, N.E. REGION.—The N.E. Region finals of the trailer pump and hydrant drill challenge shield competition were held at York Old Station on April 13. Darlington North Road Locomotive Works won easily with a time of 1 min. 53 sec., being 1 min. 2·8 sec. faster than York Carriage & Wagon Works, who were second. In the three-man hydrant drill competition eight teams competed, the winners being the Civil Engineer's Fire Appliance Workshops with a time of 1 min. 58 sec., which was 4·4 sec. faster than Darlington North Road Locomotive Works. The winners in each section will represent the North Eastern Region in the Inter-Regional Finals to be held at Marylebone Goods Yard on May 12.

RAILWAY NEWS SECTION

PERSONAL

Mr. John F. Alcock, Chairman & Managing Director, Hunslet Engine Co. Ltd., on April 30 was elected President of the Locomotive Manufacturers' Association of Great Britain.

Brigadier A. T. de Rhé-Philipe has been appointed Director of Movements, War Office, with effect from September next.

June 5, Mr. G. B. Howden was appointed General Manager, Mr. Lemass becoming Chief Officer. Mr. Lemass now replaces Mr. Howden as General Manager.

Mr. R. V. G. Pennefather, M.C., A.M.I. (Aust)., L.S., Chief Civil Engineer, New South Wales Government Railways, who, as recorded in our April 3 issue, has retired, became an Assistant Surveyor in the railway survey branch of the Department and structures. He was appointed Deputy Chief Civil Engineer and became Chief Civil Engineer in 1952.

The organisation for negotiation and consultation between management and staff representatives on British Railways, reached a further stage on April 29 when a new Regional Line Committee for Electrical staff held its inaugural meeting at Derby, London Midland Region. This

Mr. Frank Lemass
Appointed General Manager, Coras Iompair Eireann

Mr. R. V. G. Pennefather
Chief Civil Engineer, New South Wales Government Railways, 1952-53

Mr. Frank Lemass, A.C.A., M.Inst.T., Chief Officer, Coras Iompair Eireann, who, as recorded in our April 24 issue, has been appointed General Manager, was educated at Belvedere College, and for a number of years was associated with the Dublin firm of auditors and accountants, Craig, Gardner & Company. When, some time before the change of the title to that of the Dublin United Transport Co. Ltd., Mr. Lemass joined the Dublin United Tramways Co. (1896) Ltd., as Accountant, he carried out a complete reorganisation of the accountancy system. With the change to the new title he became Secretary & Accountant, and he continued to fill that post during the existence of the company. On the formation of the Irish Transport Company, as from January 1, 1945, he was appointed Assistant General Manager. Mr. Lemass was elected Chairman for 1949 of the Manager's Conference held at the Irish Railway Clearing House. At the first meeting of the Board of the newly constituted Coras Iompair Eireann held on

of Public Works in 1910. He qualified as a surveyor, and carried out surveys for the location of a number of proposed railway lines in various parts of the State. In 1914 he joined the Department of Railways as Surveyor, and carried out surveys for improvements to grades and curvature of main lines. During the 1914-18 war he was on active service and served as an officer with the Anzac light railways and with the 4th Australian Pioneer Battalion. He was awarded the Military Cross after the battle of Dernacourt in 1918. On return from active service, Mr. Pennefather resumed duties as Surveyor, and was subsequently appointed Resident Engineer in charge of the electrification of several sections of the Metropolitan Railways. He also supervised the construction of the railway workshops at Chullora and Cardiff. For a number of years he was in charge of the renewal of the permanent way throughout the State and later was appointed Assistant Chief Civil Engineer in charge of the maintenance of all tracks

committee, the first of its kind on British Railways, is a similar organisation to the Sectional Councils which operate for various railway grades other than electrical workers.

The members on the Management side are:—Mr. S. J. R. Allwood, Principal Assistant (Electrical) to the Mechanical & Electrical Engineer; Mr. A. E. Record, Staff Assistant to the Mechanical & Electrical Engineer, and Mr. A. E. Lloyd, Head of Wages Section, Regional Staff Office.

Those on the Staff side are:—Mr. E. Bramwell, Electrician in Charge, Derby, Mr. J. Foster, Leading Plumber Jointer, Dalston, and Mr. J. Steen, Servicing Attendant, Liverpool (Hall Road).

Mr. S. Seoudi has been appointed Chief Inspecting Engineer in London for the Egyptian State Railways, succeeding Mr. A. Rizk, whose appointment as General Manager was recorded in our February 13 issue.

Mr. Eric Coleby

Legal Adviser to the Railway Executive, 1951-53

Mr. J. R. Barker

Appointed Commercial Manager, New Zealand Government Railways

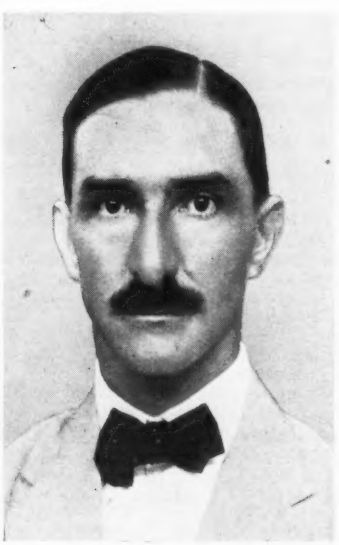
Mr. W. W. Capon

Stationmaster, Marylebone, Western Region, British Railways, 1944-53

Mr. Eric Coleby, Legal Adviser to the Railway Executive, in the Legal Service of the British Transport Commission, who, as recorded in our April 17 issue, will retire from the Commission on May 9, was educated at Westminster School and was articled to Mr. D. H. Davies, Solicitor to the Great Central Railway Company, in 1906. Admitted as a solicitor in 1911, he continued on the staff of Mr. Davies as a Solicitor Assistant, until the outbreak of war in 1914. After serving in the war and following a period in general practice outside the railway service, he was appointed Assistant Solicitor to the Cheshire Lines Committee at Liverpool in 1928. In 1935 he went to London as Assistant Solicitor (Conveyancing) to the London & North Eastern Railway Company, becoming Assistant Solicitor (Common Law & Conveyancing) in 1943. In 1945, Mr. Coleby was appointed Chief Assistant Solicitor to the London & North Eastern Railway Company, becoming Acting Chief Legal Adviser to that Company in 1947. On the formation of the Railway Executive in 1948, he was appointed Regional Solicitor to the Eastern and the North Eastern Regions of British Railways. He was appointed Assistant Chief Solicitor (Conveyancing) in the Legal Service of the British Transport Commission upon the establishment of that Service in January, 1950. A year later Mr. Coleby was assigned to the Railway Executive as Legal Adviser.

Mr. J. R. Barker, who, as recorded in our March 6 issue, has been appointed Commercial Manager, New Zealand Government Railways, joined the railway service 34 years ago as a Clerical Cadet at Wellington. He served at various North Island city and country stations and, in 1936, entered the District Traffic Manager's office at Auckland. From 1939 to 1944 he was engaged in tariff duties, and in the latter year was promoted to Commercial Agent for the Auckland railway district, a position he held until his recent appointment as Commercial Manager.

Mr. W. Capon, Stationmaster at Marylebone, British Railways, Western Region, who, as recorded in our May 1 issue, retired on April 18, after over 46 years' service, was born at Worcester and joined the service of the Great Western Railway Company at Gloucester in 1906. From 1910 he served with the Central Railway Company in various capacities including posts in the Traffic Control Offices at Leicester and Nottingham. His first appointment as Stationmaster was at Basford & Bulwell in 1935 where he remained for two years

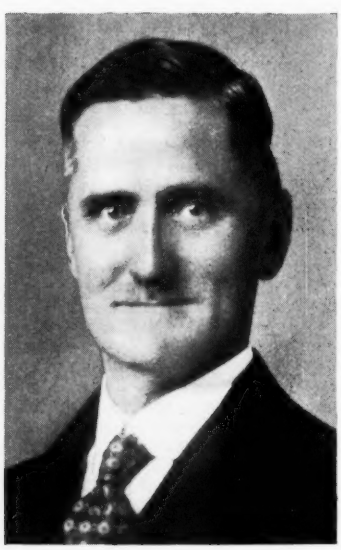


The late Col. G. A. P. Maxwell

General Manager, Tanganyika Government Railways Harbours & Marine, 1920-35

The late Mr. Gustaf Dahlbeck

General Manager, Swedish State Railways, 1938-48



The late Mr. L. C. Glenister

Chief Accountant, London & North Eastern Railway, 1942-47

before his promotion to a similar position at Nottingham Victoria. Mr. Capon transferred to Sheffield Victoria in 1941 and was appointed to the position he is relinquishing at Marylebone, in 1944.

We regret to record the death on April 25 at Nanyuki, Kenya, at the age of 67, of Colonel Geoffrey Archibald Prentice Maxwell, C.M.G., D.S.O., M.V.O., M.C., formerly Chairman of the Railway Commission of Rhodesia, and General Manager of the Tanganyika Government Railways, Harbours & Marine from 1920 to 1935. Colonel Maxwell, who was born on October 29, 1885, was educated at St. Andrew's School, Tenby, and at Cheltenham. He was gazetted to the Royal Engineers in July, 1904, and proceeded to the School of Military Engineering, Chatham. In 1906 he worked in the London & South Western Railway shops at Nine Elms, and in the running shed at Exeter, subsequently being posted to the 8th Railway Company, R.E., at Longmoor Camp, where he remained until October, 1908. In that month he left for Northern Nigeria and was employed as Officer-in-Charge of the Platelaying District on the construction of the Baro-Kano Railway. He returned to R.E. duty at Longmoor and Chatham in 1911 and 1912, leaving for the East African Protectorate as Assistant Director of Surveys in June, 1912, which post he held until required by the Colonial Office for the Nigerian Eastern Railway in 1914. Colonel Maxwell then returned to England to take out personnel for this new work, but sailed instead for France on August 9, 1914, as D.A.D.R.T., becoming Assistant Director-General of Transportation in Lord Rawlinson's Fourth and Lord Plumer's Second Army. He was mentioned seven times in despatches, was awarded the D.S.O. and M.C., and a Brevet Majority, and also the French and Belgian Croix de Guerre. He was an Officer of the Order of Leopold of Belgium and an Officer of the Legion of Honour of France. He was appointed British Member of the Inter-Allied Railway Commission of Control in occupied Germany, and finally Assistant Inspector-General of Transportation and Deputy Chairman of the Communications Section of the Supreme Economic Council at the Peace Conference at Paris. In July, 1920, Colonel Maxwell became General Manager, Tanganyika Railways, and in 1925 took over the control of the Tanganyika Territory Harbours & Marine. He was awarded the C.M.G. in 1934. Colonel Maxwell retired from the General Managership of the Tanganyika Government Railways in 1935, and, in 1939, he was appointed Chairman of the Railway Commission of Southern Rhodesia, Northern Rhodesia, and the Bechanaland Protectorate. In the course of the next year, he was re-employed in a military capacity as Assistant Director of Transportation, and his services during the 1939-45 war were mentioned twice in despatches.

We regret to record the death on April 10, at the age of 70, of Mr. Gustaf Dahlbeck, General Manager of the Swedish State Railways, 1938-48. Mr. Dahlbeck, who retired on December 31, 1948, was born at Ostersund in 1883, and graduated as Civil Engineer at the Royal Technical University, Stockholm, in 1906. In the same year he entered the Highways Department. His railway career began in 1909, when he was engaged on construction of the Swedish Inland Line in Nordland. In 1916 he was in charge of widening works, having been appointed Permanent Way Engineer of the State Railways administration in 1915. In 1919 he was made Chief of Administration, Engineering department. He became Manager of the Fifth District in 1927, and in 1932 went to Gothenburg as Manager of the Second District, the position he held up to his appointment as General Manager in 1938.

Mr. L. C. Glenister, Chief Accountant, London & North Eastern Railway, 1942-47, whose death was recorded in our May 1 issue, received his early training in accountancy in the Borough Treasurer's Department at Hastings from 1903 to 1911, and, in March of the latter year, joined the former Great Northern Railway, when he was posted to the Joint Lines Section at Kings Cross. A year later he was transferred to the Book-Keeping Section, where he was employed until 1914, when he joined the Queen's Westminister Rifles (16th London Regiment), with which he served until 1919, being wounded in France. In April of that year, Mr. Glenister returned to the Book-Keeping Section at Kings Cross, where he remained until the grouping in 1923, when he was transferred to the Chief Book-Keeper's Office of the L.N.E.R. In 1928, he was appointed Expenditure Assistant to the Chief Book-Keeper, and on January 1, 1935, he was promoted to Locomotive Accountant, North Eastern Area, at Darlington. He was appointed Assistant Accountant in 1937, and Chief Accountant in 1942. Mr. Glenister, who retired in 1948, subsequently assisted Sir James Milne in the Eire Transport inquiry, which took place in that year.

Mr. H. F. Smart, M.B.E., District Operating Superintendent, Burntisland, Scottish Region, British Railways, retired on May 3 after 52½ years' service.

Mr. C. J. Bromley, Assistant (Parcels Handling & Modernisation), Passenger Services, Operating Superintendent's Department at Euston, British Railways, London Midland Region, who has been appointed Deputy Assistant & Senior Investigator, Commercial Investigation Bureau, Commercial Superintendent's Office, Euston, began his railway career at Liverpool in 1912 on the former London & North Western Railway. He obtained a wide experience of railway working throughout the London Midland system and was responsible for the introduction of the parcels numbering system on the former London Midland & Scottish Railway, which has now been adopted as standard practice on British Railways and is already in operation in the Eastern, North Eastern and Scottish Regions. The scheme enables new members of the staff or persons not conversant with the geography of the line to sort parcels correctly.

We regret to record the death on May 2, at the age of 70, of Mr. A. L. Lunn, Electrical Engineer (Generation), London Transport, 1937-48. Mr. Lunn joined the London Electric Railways as Deputy Electrical Engineer in 1930, having previously served with Sunderland Corporation Electricity Department and Manchester Corporation Electricity Department. He continued as Deputy Electrical Engineer under the London Passenger Transport Board and became Electrical Engineer (Underground Section) in 1934, and Electrical Engineer (Generation) in 1937. Mr. Lunn was a Fellow of the Institute of Fuel and was first President of the Electrical Power Engineers' Association, which office he held for two years.

Mr. H. O. Hinton and Mr. E. Cooper have been appointed to the Board of A. C. Morrison (Engineers) of Loughborough, a member of the Associated British Engineering Group. Mr. Hinton was formerly Personal Assistant to the late Managing Director, Mr. Alan P. Good. Mr. Cooper will later this year make a tour of Australasia and the Near and Far East in order to hold discussions with the company's overseas agents and distributors.

Mr. E. Morgan has been appointed Senior Liaison Engineer in the Components Division of the Plessey Co. Ltd.

Dr. S. W. Saunders has been appointed Joint Managing Director of I.C.I. (Billingham Division) in succession to Dr. R. Holroyd, who has been appointed to the main board.

Mr. F. K. Pointon has succeeded Mr. I. L. Gray as General Manager of Hebble Motor Services Limited, Mr. Gray having resigned to take up the appointment of General Manager of Yorkshire Woollen District Transport Co. Ltd.

Mr. W. B. Motum, a Special Director and Chief Accountant of Vickers Limited and Chief Accountant of Vickers-Armstrongs Limited retired on April 30. He is succeeded as Chief Accountant of both Companies by Mr. M. G. Spriggs.

Mr. L. J.-B. Forbes, Fourth Floor, 165, Bloorstreet East, Toronto 5, has been appointed General Representative in Canada of Vickers Limited, and of its subsidiary and associated companies.

The following elections to the Council of the British Electrical & Allied Manufacturers' Association are announced:—

Sir Harry Railing, Chairman & Joint Managing Director of the General Electric Co. Ltd. has been elected President for a further year.

Mr. D. D. Walker, Joint Managing Director of Evershed & Vignoles Limited, has been elected Chairman of the Association.

Mr. E. H. Ball, Managing Director of the British Thomson-Houston Co. Ltd., has been elected Vice-Chairman.

Institution of Mechanical Engineers

The following is a selection of names from a list of recent elections to the Institution of Mechanical Engineers:—

Members:—Mr. R. T. Sawyer, American Locomotive Company, U.S.A., Mr. J. S. Scott, Locomotive Works Manager, Gorton, British Railways, Eastern Region.

Associate Members:—Mr. S. Griffiths, Motive Power Division, Western Australian Government Railways, Midland Junction, Western Australia, Mr. H. E. Kemp, Southern Region, British Railways.

ANNUAL R.O.D. DINNER

The annual reunion dinner of the Royal Engineers (Railway Operating Division) was held at the Transportation Club, 44, Wilton Crescent, S.W.1, on May 1. Sir Michael Barrington-Ward, Member of the Railway Executive, presided. Among the officers and guests present were:—

Messrs. F. L. Castle, J. Clubley Armstrong, B. W. C. Cooke, T. G. Creighton, F. Horler, R. Horsfield, M. D. Robinson, E. W. Rostern, Colonel H. Rudgard, Lt.-Colonel K. R. N. Speir, Brigadier W. G. Tyrrell, Messrs. J. W. Watkins, W. Cyril Williams.

Parliamentary Notes

Transport Bill in Lords

The Commons amendments to the Lords amendments on the Transport Bill were agreed to on May 5.

Lord Lucas announced the Opposition's acquiescence, but said the passage of the Bill had been an unhappy experience. He thought the whole country agreed that the Government did not come out of this transport debate with a great deal of credit. It had misjudged public opinion and the needs of the country, and he could only hope that when it found its real difficulties only just beginning the Government would have only one thought in its mind. That was, the good of the country as a whole and not the good of any section of the community to which spurious election promises had been made.

Censure Motion in Commons

Mr. Herbert Morrison, Deputy Leader of the Opposition, on May 5 in the House of Commons, moved a motion of censure arising out of the Government's conduct of the Transport Bill, in the following terms: That this House deplores the failure of the Government so to arrange their programme of business as to enable this House adequately to consider their proposals for legislation, with results contrary to the spirit of the Constitution, detrimental to the privilege of the Commons and derogatory to the legislative status of the House.

Mr. Morrison asserted that it was difficult for a Government with a small majority to go in for substantial legislation of a highly controversial character.

If it did, it was almost inevitable that it would be driven into the methods by which the Transport Bill was handled in its earlier stages in the House, the use of the guillotine. It was used on the amendments by the House of Lords in a form which was utterly unprecedented in Parliamentary history.

The Government had taken steps whereby the legislative powers of the Commons had been diminished, and the legislative initiative and authority passed to another Chamber.

A second principle was that the Commons was the authority as between the two Houses in financial matters, and financial matters arose under the Transport Bill. Their Lordships had been used as a legislative stooge by the Government to avoid debate in the House of Commons and to prevent the members of that House from discharging their duties.

The allocation of time order destroyed three rights of the Commons—the right to decide amendments on their individual merits, to amend the proposed amendments, and to waive, or not to waive, its privilege in financial matters. The Government's action had been farcical and unconstitutional. There was no precedent for agreeing to Lords amendments, privilege or no privilege, in a single question. It was an additional sin that financial privilege should have been involved.

Mr. Alan Lennox-Boyd, Minister of Transport, replied to the ensuing debate. He said he was authorised to say that whatever had been the Government's majority, they would have recommended that they should discuss this Bill on the floor of the House.

Denying that there had been inadequate discussion, he declared: "Parliament has never been brought into such close and continuous contact with the moulding of a Bill as during the stages of this Bill."

If the Government had known in November that the Opposition would filibuster on the Lords' amendments, then the use of the guillotine would clearly have been regarded as suitable to deal with that eventuality.

The Opposition motion was defeated by 294 to 265, and a Government amendment deploring the Opposition's delaying tactics on the Bill was carried by 293 to 164.

Statement on Steel Rationing

Mr. Duncan Sandys, Minister of Supply, said in the House of Commons on May 5, in reply to a question by Mr. Nabarro (Kidderminster—C.), that the output of iron and steel in general had been steadily increasing mainly as the result of the completion of a number of new blast furnaces during recent months.

It was expected that home production of steel in 1953 would be about 17,500,000 tons. That was about 1,300,000 tons more than in 1952. While there would continue to be some shortage of steel plate, supplies as a whole were now considered to be sufficient to meet home demands, as well as to provide somewhat larger quantities for export.

The satisfactory increase in home production should make it possible to reduce appreciably our imports of steel, but if demand should rise further than was expected, there should not be much difficulty in purchasing additional steel from abroad.

"Subject to the continuance of the voluntary scheme for the distribution of steel plate which he had announced recently, they were satisfied that it was no longer necessary for iron and steel to be rationed."

Steel Bill Report Stage in Lords

Lord Wilmot, when the Iron & Steel Bill was considered on report on April 30, moved an amendment to Clause 2 (Iron & Steel Board) providing that the chairman and at least three other members of the Board would be whole-time.

Lord Mancroft (Lord in Waiting) said the Minister of Supply should be free in making the appointments. The Government would be disposed to accept a later amendment by Lord Hawke that a "whole-time" member could include one required to devote himself exclusively or mainly to the performance of his duties, although his appointment to the Board might not be his only appointment.

The amendment was negatived.

Efficient Production

On Clause 3 (Supervision of the industry by the board), Lord Silkin moved an amendment to delete a reference to "competitive conditions" in relation to the duty of the Board to promote the efficient, economic, and adequate supply of products. He said that there might be cases where it was neither profitable nor desirable for the Board to encourage competition.

Lord Mancroft said the Government regarded the words as a general signpost to the Board, and not as a rule to be obeyed in all circumstances.

The amendment was negatived.

An amendment by Lord Wilmot, to extend the Board's duty concerning the supply of raw materials to include the supply of manganese ore as well as iron ore was agreed to.

Return to Private Ownership

On Clause 18 (Duty of Iron & Steel Holding & Realisation Agency to return undertakings to private ownership), Lord Silkin moved an amendment to provide that when a transaction involved more than £1 million it would not be valid until the Treasury had signified approval, and that either House should be informed of the Treasury's approval.

Lord Mancroft said he could not accept the amendment, but he could state that the Treasury would require important disposal operations to be referred specifically to them before approval was given and would lay any such disposal operations before either House in some convenient form.

The amendment was, by leave, withdrawn.

Lord Hawke's amendment as to whole-time membership of the Board was agreed to.

The Report Stage was completed.

Steel Bill Third Reading

The Iron and Steel Bill was read a third time in the House of Lords on May 5 and passed.

Lord Wilmot, commenting on the Bill, said the Government had gone out of its way to make it inevitable that with another change of Government they would see a new Iron and Steel Bill.

Earl Jowitt spoke on similar lines, but would not forecast the terms of the Bill which a Socitlist Government would bring in.

London Transport Inquiry

Mr. Alan Lennox-Boyd (Minister of Transport) said on May 4, in answer to a question by Mr. Ernest Davies (Enfield E.—Lab.) as to what consultation he had had with the B.T.C. and the unions on the committee of inquiry into London Transport, that nothing relevant to their terms of reference could be excluded. Charges were exempt because they were the responsibility of the Transport Tribunal.

The inquiry, he added, would not embrace wages. If some agreements on conditions of service seemed to the committee to have resulted in the uneconomic use of manpower, it could draw attention to that and suggest that it be examined through the appropriate negotiating machinery. He had told the Chairman of the B.T.C. and the London Transport Executive some time ago of the possibility of an inquiry. There had been no consultation with other persons. He intended that there should be trade union representation on the committee.

MUREX WELDING ELECTRODES.—Five new electrodes for electric arc welding are now being produced by Murex Welding Processes Limited, Waltham Cross, Herts., the Speedex, Deepex, Ferex B, Contex, and Cinnifex. The electrodes have all successfully undergone extensive field trials, and have been in use in industry in limited quantities, mainly because of steel shortage, for some time. Increased steel supplies are available, and the new electrodes are in full scale production. The electrodes are designed for specific duties; high-speed welding with easy slag removal, downhand welding on plate thicknesses up to 1½ in., welding of medium alloy steel and mild steel producing welds of high impact value, welding in downhand and overhead positions in mild and low alloy high tensile steels, and for welding nodular and other types of cast iron with high ductility. The deposits gives an analysis of 55 per cent nickel and 45 per cent cast iron.

Midland Railway Co. of Western Australia Ltd.

Need to rationalise finances of railway systems serving the state

The annual general meeting of the Midland Railway Co. of Western Australia Ltd. was held in London on April 30, Mr. Robert Adeane, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts said that for the year ended June 30, 1952, gross receipts at £556,000 were up £160,000 and working expenses at £444,500 were up £92,000. The apparent improvement was illusory because from the figure for net receipts, including revenue from interest and dividends, of £114,500, no less than £136,500 (in the main comprising provision for renewals and deferred maintenance £62,900 and U.K. taxation £47,500) fell to be deducted, leaving a debit balance for the year of £21,982.

The reasons for net results being so bad despite goods having been carried at higher rates were first that wages, which accounted for two-thirds of their total expenditure, were constantly and repeatedly rising without a corresponding rise in freight rates, and secondly, the undue expense of maintaining a track long overdue for renewal.

Wages were increased last year by A44s. 3d. per week and this year by A39s. per week. These increases had put their wage bill up by some £A110,000.

This year, too, a serious and long-enduring strike of the metal workers did the company much harm and caused an under-expenditure on maintenance during the year—but for which the increase in working expenses would have been much greater.

Their track and rolling stock suffered unduly heavy wear and tear during the war years which, due to material shortages, it had been impossible to make up. These arrears of maintenance had to be provided for and accounted for the major part of the item of £62,900, namely the year's allocation already referred to.

Their board had given much thought to the serious position which had arisen due to the fact that these annual provisions which, as material was coming into free supply, should be spent had had to be utilised for essential capital purposes such as the provision of buses for the road service department, without which their railway could hardly have survived until today. To meet this position the board sent out a circular on April 2 last to the holders of the second mortgage cumulative income debentures requesting sanction to the issue of £100,000 4½ per cent first mortgage debentures. If and when this sanction was received this money would be spent on vital renewals which the board considered were not only necessary but essential to all interests concerned.

The deterioration in the condition of their line was a matter of grave concern not only to the directors and proprietors of the Midland Railway of Western Australia but also to the Western Australian State, whose system parallelled their much smaller system and to a great extent governed the company's fortunes, as their rates of necessity governed the company's rates.

The West Australian newspapers of April 13 last gave the State Railways' loss for the nine months to March 31 last as £A3,446,000. The railway problems of Western Australia had indeed assumed grave proportions and representations had been made by the company's local board to the Government urging them most strongly to find some solution to the problem of rationalising the finances of the railways which played such a vital role in serving the important agricultural zones through which they ran.

During the year under review their passenger traffic continued to decline whereas goods and livestock showed small tonnage increases. Their road service department carried a slightly smaller number of passengers but increased its parcels traffic. The road service had made rapid progress in recent years and this decrease was not unexpected and was not a cause for alarm.

The Chairman then made special reference to the large item of £47,568 for U.K. taxation and the larger cash balance of £86,760 against £40,146 last year. Both arose from under-spending last year on working expenses account due to the strike.

It was a matter of great regret that lack of profit for the year prevented any payment being made on the second debentures.

Turning to the current year, the Chairman said railway traffics were down, partly due to the aftermath of the strike and partly due to restriction of credit by the Federal Government, which had affected business activities generally.

Expenses were up, partly due to overtaking of accruals of maintenance made more expensive by inevitable deferment and partly due to increased cost of wages and materials. Wages rose a further A15s. 9d. in the first six months of the current year.

To sum up the situation, it could only be described as serious in the extreme and could only be solved by the State Government facing up to the problem and rationalising with or without Federal assistance the finances of the two railways serving the State.

The report and accounts were adopted.

Reconstruction of Retaining Walls and Track Formation at Walthamstow

Work has begun on the reconstruction of the retaining walls and track formation on the St. Pancras-Barking line between Albert Road and Shrublands Road Bridges, Walthamstow. The original brick retaining walls were removed about 1948 when the clay through which the railway cutting is constructed became weak through water penetration and the walls began to overturn. The old walls were temporarily replaced by two walls of steel sheet piling and kept in position with timber struts placed horizontally under the railway tracks.

The new walls will be constructed in reinforced concrete and the existing timber struts will be replaced by reinforced concrete struts also passing under the tracks. The concrete struts are in the form of inverted arch ribs and were precast in two sections. Each section weighs approximately 2½ tons and was being placed in position by means of a 10-ton travelling steam crane. Some of the struts were positioned on April 26 and the remainder on May 3.

The old track formation, consisting largely of clay, is being removed to a depth of approximately three feet below rail level. This will be filled in with sand, chippings and new ballast, and a new drain is to be constructed. The work is being carried out by Tersons Limited under the supervision of Mr. J. I. Campbell, Civil Engineer, Eastern Region, and is expected to require approximately three months for completion.

N.E. Region Cheap Day Fares

Following the recently-introduced cheap day fare to Scarborough, the North Eastern Region has announced further stages in the scheme of experimental reduced day fares.

From May 1 the day return fare from York to Whitby by any train any day is 7s. 6d. The day excursion fare in the summer was 12s., and passengers had to travel by specified trains. A ticket at ordinary return fare, available for 3 months, is 16s. 8d.

The day fare from York to Pickering has also been cut to 4s. 3d., and that from Pickering to Whitby to 4s. 1d. Whitby and Pickering passengers have the same facility in the reverse direction.

Also from May 1 the day return fare from Darlington Bank Top to Middleton-in-Teesdale by any train any day has been 4s. 4d., as compared with the previous day fare of 5s. 9d. A ticket at ordinary fare, available for 3 months, is 7s. 8d. The day fare from Darlington to Barnard Castle has been cut to 2s. 11d. These facilities are also available in the reverse direction.

Western Region First Aid Movement

First Aid competitions have been held in each of the 16 districts of the Western Region, the total number of teams entering being 128. Semi-final eliminating rounds were held at Birmingham, Bristol and Newport, and the teams which gained the first nine places in the semi-finals competed in the Final Competition held in the Porchester Hall, Paddington, on Tuesday, April 28.

The tests were set by Dr. M. M. Scott, M.R.C.S., L.R.C.P., of London; Doctor C. H. Drake, M.R.C.S., L.R.C.P., of Gloucester; and Doctor J. Shibko, M.R.C.S., L.R.C.P., L.M.S.S.A., of Swansea.

A large number of spectators, including officers of the Western Region, witnessed the contest. The subsequent presentation of prizes and trophies was presided over by Mr. K. W. C. Grand, Chief Regional Officer, and the presentations were made to the winning teams by Mrs. Grand.

The result of the test was announced by the Regional Ambulance Secretary, Mr. P. Anstey, as under:—

	Marks (max 500)
1. Taunton (winners of Challenge Shield) ...	455
2. Bristol D.O.S.O. (winner of Carvell Cup)	426
3. Newport High Street "A"	367½
4. Truro	347½
5. Gloucester Central	346½
6. Reading "A"	331½
7. Bromsgrove No. 1	321½
8. Paignton	311
9. Swansea Docks	304½

The Henry Butt Bowl was presented to the Paignton team, who secured the highest position in Class 2 in this year's competitions.

A vote of thanks to the adjudicators, patients, and other helpers was proposed by Mr. R. Burgoyne, Regional Staff Officer, and to Mr. and Mrs. Grand by Mr.

W. S. Salter, Captain of the winning team. The Taunton and Bristol D.O.S.O. teams will represent the Region in the British Railways & London Transport (Railways) National Competition, which is being held in the Central Hall, Westminster, on May 21.

Diesel Engine Price Reductions

Mr. R. Lister, Director of Blackstone & Co. Ltd., at a meeting in London on May 1 announced the decision to give price reductions up to 25 per cent on the company's entire range of industrial oil engines. They felt, said Mr. Lister, that this considerable reduction was in line with the Chancellor of the Exchequer's Budget policy in taking a step towards halting inflation and stimulating not only home trade but the export trade.

As far as the vertical engines were concerned, the price reduction varied from £550 to nearly £2,000. On the engine which now showed a price reduction of £550 there would be a 20 per cent initial tax allowance of £295, showing a total first year saving of £845 or nearly 41¼ per cent. On the engine which showed a price reduction of £2,000, there was, with tax allowance, an initial saving of 42¼ per cent compared with pre-Budget prices. Their new prices came into force that day.

The Blackstone range includes an engine for traction similar in specification to the "E.V." series of industrial vertical engines. This is the "E.R.T.6" normally-aspirated engine, with a rating of 350 b.h.p. at 750 r.p.m., and is being supplied for certain of the diesel-electric shunter equipments ordered by British Railways to which reference is made in our Contracts & Tenders columns this week.

Mechanical Handling Demonstration

Rapier mobile cranes and fork lift truck demonstration at Ipswich Goods Depot

Representatives of the Railway Executive and officers from the Commercial, Mechanical & Electrical Engineer's, and the Road Motor Engineer's Department of the Eastern and other Regions attended a demonstration of Rapier equipment manufactured by Ransomes & Rapier Limited, at Ipswich Goods Depot on May 1. The following were present :—

Messrs. R. A. Riddles, R. C. Bond, E. K. Whittingham ; C. H. White ; K. Purkiss ; S. H. Smith ; J. Winter ; F. R. Tamplin; J. Brooks; A. J. Shewan; P. Keeling; S. Holt; H. V. Smith; Mr. Dakers ; Messrs. J. Hippisley ; R. V. Searle ; W. R. Bastin.

The demonstration was held to illustrate the manœuvrability of the Rapier No. 7 standard mobile crane, and the Rapier fork lift truck with cantilever jib, both working in a restricted area; the width between rails was 28 ft. 9 in. The tests included unloading and loading from open wagons and flats, the first being the use of the mobile crane for unloading a "B.D." container of six tons weight from a high side on to a road lorry. The distances from the container roof to the road was 12 ft. 1½ in., and the height from the crane hook when inserted in the slings ready for lifting was 16 ft. 7½ in. from the road. The versatility of the crane was further demonstrated by the unloading of a tree trunk from a bogie wagon; the tree weighed 4 tons 7 cwt. and was 42 ft. long. After lifting, the mobile crane travelled with the load along the road, reversed, and reloaded.

The fork lift truck carried out a series of demonstrations using the fork jib and forks. The fork jib unloaded a D container weighing 3 tons 2 cwt., and was also used for unloading the tree trunk. Various lifts were also carried out with the forks which included containers up to a load of 6 tons. A demonstration was also given with a mobile No. 10 super crane with cantilever jib for dockside work capable of unloading a ship with a 50 ft. beam.

The visitors were afterwards entertained at a buffet luncheon and were conducted on a tour of the crane manufacturing department by Mr. R. R. Stokes, Chairman and Managing Director, and Mr. A. S. Stokes, Technical Director, Ransomes & Rapier Limited. At the luncheon Mr. A. S. Stokes said that there were still many problems connected with mechanical handling yet to be solved and he thought that the best way of solving them was for the designer and the user to get together and discuss the various problems during the early stages of design. Ideas could be implemented with consequent saving from both the manufacturers' and the users' point of view.

Mr. R. A. Riddles in reply said that the problems of mechanical handling in railway goods depots depended on the size of the depots. From an economical standpoint it was obvious that smaller depots required equipment of more versatility as they had less equipment. He agreed that much could be done in the early stages by a discussion of problems between the designers and users of equipment.

NEW ROAD TRANSPORT COMPANY IN JAMAICA.—Negotiations for the operation of the passenger road transport services in Kingston, Jamaica, by a new local company to be formed by the British Electric Traction Co. Ltd., Close Bros. Limited, and United Transport Co. Ltd., have reached an advanced stage and the new company is about to be registered with the title Jamaican Omnibus Services Limited. Mr. H. Weedy, General Manager of City of Oxford Motor Services Limited, has been selected as General Manager of the new company and is expected to leave for Jamaica next month.

New District Line Bridge at Fulham, London Transport

Replacement of 70-year old wrought-iron span

On Sunday, April 19, London Transport engineers rolled into position a new 300-ton steel bridge with concrete deck to replace the wrought-iron structure which since 1880 has carried the District Line over New Kings Road, Fulham, between Parsons Green and Putney Bridge stations.

Work began at the site last December. To avoid interrupting railway traffic, the new bridge, which is 62-ft. long, was erected on temporary steel trestles alongside the old bridge. The rolling out of the old bridge and the rolling in of the new one was carried out between the close of traffic on Saturday, April 18, and 8 p.m. on the Sunday. The work presented particular difficulties in view of the sharp angle at which the bridge crosses the road, but was carried

(Left) New bridge about to be rolled into position (note cable runs supported by timber); (right) old bridge moved out on right to make way for replacing span

out without incident. As the old bridge has now to be dismantled and removed, it is unlikely that the road will re-open to traffic for some weeks.

Contractors for the work were the Cleveland Bridge & Engineering Co. Ltd.

Staff & Labour Matters

Engineers' Wage Claim

Leaders of the 38 unions affiliated to the C.S.E.U. decided on April 29 to recommend a claim for a 15 per cent increase in wages for workers in the engineering industry. Each union will consider this recommendation, and the final decision will be taken at York by the C.S.E.U. on May 20.

If conceded the claim would mean a rise of about £1 a week for skilled workers and 17s. 6d. for unskilled, the cost being stated to be in the region of £125 million a year.

The A.E.U. executive council on May 4 agreed to recommend support for the proposed increase of 15 per cent.

Contracts & Tenders

The Metropolitan-Cammell Carriage & Wagon Co. Ltd., has received an order from the Rhodesia Railways for 484 bogie high-side wagons and 24 four wheel explosive vans.

The Crown Agents for the Colonies have placed an order with the Gloucester Railway Carriage & Wagon Co. Ltd., for 94 25-ton bogie covered wagons for the Nigerian Railway.

The Turkish Government has placed an order for 500 four-wheel wagons with the Jugoslav rolling stock works Dragoslav Djordjevic Gosa at Smederevska Palanka (Serbia).

British Railways have ordered the power equipments for 85 diesel-electric shunting locomotives which are to be built in 1954 and 1955. This is an instalment of the five-year programme of 573 diesel shunting locomotives covering the years 1953-1957.

The new contracts are for 45 equipments from the English Electric Co. Ltd., fitted with English Electric engines; 15 equipments each from British Thomson-Houston Co. Ltd., and the General Electric Co. Ltd., with Blackstone engines; and ten from Crompton Parkinson Limited, with Crossley engines.

The main frames, wheels, cab structures and mechanical parts of these locomotives will be manufactured and erected at the British Railways workshops at Darlington and Derby.

The Board of Trade, Commercial Relations & Exports Department, announces in its Special Register Information Service that notification has been received of a call to tender (No. SR1/16198-D/11), issued by the Director-General of Supplies & Disposals, Government of India, for the supply of 10,899 cast steel locomotive components.

The closing date for receipt of tenders, which should be addressed to the Directorate-General of Supplies & Disposals, Shahjahan Road, New Delhi, is June 15. Two copies of the tender form and specifications are available for inspection at the Board of Trade.

The Special Register Information Service of the Board of Trade, Commercial Relations & Exports Department, reports that the United Kingdom Trade Commissioner at Delhi has notified a call for tenders issued by the Directorate General of Supplies & Disposals, Government of India, for:—

(*a*) 198 sets combination fishplates for 75 lb. R.F.F. and 88½ lb. bulkhead rails.

(*b*) 70 cwt. crib spikes (MS), 9 in. long × ½ in. sq. ; 3,125 cwt. dog spikes (MS) (m.g. and n.g.), 4¼ in. under head × ⅝ in. square, round pointed, to be used without bearing plates.

Tenders should reach the Director General of Supplies & Disposals, Shahjahan Road, New Delhi, by 10 a.m. on (a) May 13; (b) May 14.

A copy of the tender documents is available for inspection at the Board of Trade. A further copy is available on loan in order of application. Reference CRE/15178/53 should be quoted for tender (a) and CRE/15174/53 for tender (b).

The Special Register Information Service of the Board of Trade, Commercial Relations & Exports Department, reports that the United Kingdom Trade Commissioner at Delhi has notified a call for tenders issued by the Directorate General of Supplies & Disposals, Government of India, for the supply of:—

100 axle-box body 9 in. × 4½ in. journal, 1 in. groove, 7 ft. 3 in. centre of journal.

330 axlebox assembly 10 in. × 5 in. journal (b.g.) for coaching underframe and 16 tons axle four-wheel wagons.

700 axlebox body 10 in. × 5 in. journal (b.g.).

Tenders should reach the Director General of Supplies & Disposals, Shahjahan Road, New Delhi, by 10 a.m. on May 22, 1953. A copy of the tender documents is available for inspection at the Board of Trade by representatives of United Kingdom manufacturers. A further copy is available on loan in order of application. Reference CRE/15241/53 should be quoted.

The Special Register Information Service of the Board of Trade, Commercial Relations & Exports Department reports that the First Secretary (Commercial) of the British Embassy at Tel Aviv has notified a call for tenders issued by the Israeli Ministry of Communications for the supply of railway rolling stock and other equipment including:—

Ordinary steel or light steel coaches.

36 bogie phosphate wagons.

Six diesel-electric locomotives, 1,500 h.p., mixed traffic, Co-Co wheel arrangement.

Five diesel-electric or diesel-hydraulic locomotives, 500-600 h.p. shunters, Bo-Bo wheel arrangement.

Ten motor trolleys, 36-h.p. gang cars to carry eight men.

Four motor trolleys, 10-13-h.p. section cars to carry eight men.

Four inspection cars, 6-8 h.p.

40 trailers for section and gang cars, 3-ton capacity (ten to be suitable for carrying seated men).

13 tamping machines.

Two locomotive cranes.

One diesel powered shovel.

Four cranes, 3-5 ton capacity, mounted on rubber wheels.

Six forklifts.

Miscellaneous power-driven and other tools for permanent way.

27 sets flashing light signals for level crossings.

Tenders will be considered only from authorised manufacturer's agents and should be submitted to the Ministry of Communications, Main Post Office Buildings, Jerusalem (New City), Israel, in a closed envelope marked "Rolling Stock Supply Centre" not later than noon on May 26. Specifications and plans are obtainable against payment of IE10 from the office of the Railway Executive at Haifa between the hours of 10 a.m. and noon on Sundays to Thursdays. One copy of the specifications will be available for inspection by appointment at the Embassy of Israel in London. Appointments should be made with Mr. E. Margalit, Assistant Economic Attaché, Economic Counsellor's Office, Embassy of Israel, 18, Manchester Square, London, W.1. Telephone calls to Mr. Margalit should be made between 3 p.m. and 5.30 p.m. on Mondays to Fridays only. (Telephone No. Welbeck 0164.)

The Israeli authorities have indicated that they require long-term credit for the purchase of this equipment and they will therefore only consider tenders from firms who can offer this facility for payment.

The issue of this circular in no way implies any undertaking that the necessary raw materials will be made available, and United Kingdom manufacturers are reminded of the contents of Special Register Circular GEN/683 of June 11, 1952, headed "Notification of Calls for Tender Issued Abroad," which warns manufacturers of the need for their securing any necessary licences and providing the raw materials.

Notes and News

Ministry of Transport: Railway Employment Inspector Required.—The Civil Service Commissioners invite applications for the post of railway employment inspector in London. See Official Notices on page 551.

Crown Agents for the Colonies.—A technical instructor is required by the Nigerian Government Railway for one tour of 18 to 24 months either on contract or with prospect of permanency. See Official Notices on page 551.

Vacancies for Two Assistant Engineers.—Two assistant engineers, between 25 and 30 years of age, unmarried, are required for service on the Guaqui La Paz Railway, Bolivia, one with electrical mechanical apprenticeship including experience with diesel engines, and the other with apprenticeship permanent way department of British railway and with drawing office experience. Knowledge of Spanish desirable. See Official Notices on page 551.

Leyland Motors Limited.—Net profit for the year to September 30, 1952, was £557,311, as against £456,395 for the preceding 12 months. After adjustments relating to previous years and allowance for dividends, the profit retained in the business is £374,285, compared with £591,989. An appropriation of £500,000 is again made to general reserve, and the unappropriated profit of £419,183 carried forward compares with £544,898 a year ago.

Gatwick—Le Touquet Air Service.—From May 15 Silver City Airways Limited will operate two air services daily in each direction between Gatwick Airport and Le Touquet, using Bristol Superfreighter aircraft with accommodation for passengers, cars, motorcycles, and cycles. Departures from Gatwick will be at 12.30 and 6.30 p.m., with return flights at 11 a.m. and 5 p.m.

Aluminium Limited Shares Offer.—The directors of Aluminium Limited, of Montreal, decided at a meeting held on

April 16 to proceed with an offer to the company's shareholders of rights to subscribe for 818,657 additional shares without nominal or par value at the rate of one share for each ten shares held of record at the close of business on April 24. The subscription price for such additional shares was fixed at $33.50 (Canadian) per share, or, at the option of each subscriber, $34.00 (United States) per share.

Western Region Fire Drill Finals.—In the finals of the Western Region Fire Drill Competitions at Paddington on April 17, the three-man hydrant drill test was won by Paddington Goods Department team, and the five-man trailer pump drill test by Swindon Works, Mechanical & Electrical Engineer's Department Team.

British Railways Coal, Iron and Steel Traffic.—During the weekend, 346,430 tons of deep-mined and opencast coal were cleared by British Railways, bringing the total for the week ended 6 a.m. on May 4 to 3,322,710 tons. The latest figures for iron and steel traffic show that in the week ended April 25, 220,469 tons were despatched from the principal steel works and 325,000 tons of iron ore were conveyed during the same period.

The Vulcan Foundry Limited.—The profit of the Vulcan Foundry Limited for the year to December 31, 1952, after charging £111,993 (£196,206) for taxation, and crediting £18,509 (£18,509) in respect of a dividend from a subsidiary company, is £77,257 (£145,998). After deducting £40,000 (£80,000) transferred to general reserve, nil (£10,000) to reserve for pensions, nil (£10,000) to provisions for employees' welfare, £2,625 (same) for the dividend on the 5 per cent cumulative preference stock for the year to December 31, 1952; and adding £62,046 (£58,604) brought forward, there is an available balance of £96,678 (£101,977). The directors recommend a dividend of 7 per cent (7 per cent and a bonus of 2 per cent) on the ordinary stock, less income tax at 9s., which will absorb net £32,536 (£39,931), carrying forward £64,142 (£62,046). The fall in the net profit figure is largely accounted for by serious shortage of steel supplies which persisted throughout 1952, and the consequent dislocation to the manufacturing programme.

Accident to British Railways Steamer.—The British Railways steamer *Duke of York*, sailing from the Hook of Holland to Harwich, was in collision with the American cargo ship *Haiti Victory* in the early morning of May 6. The bows of the *Duke of York* were cut off in the collision and passengers were taken to Harwich in the *Haiti Victory* and to Dover in a rescue ship. Ninety passengers were landed at Dover, where three were taken to hospital.

Kent Coast Main Line to Reopen by Whitsun.—The Southern Region Kent Coast main line will be reopened to normal traffic on May 21, in time for Whitsun. The line was severely damaged by the high tides on January 31. Reopening on May 21 is ten days ahead of schedule, which provided for June 1 as the reopening date. A description of the repairs effected and traffic diversions appeared in our April 24 issue.

British Order for Castings for United States Defence Programme.—The English Steel Corporation Limited, Sheffield, has received orders for large steel castings for plant to be built for the United States defence programme. The heaviest of the castings will weigh about 170 tons and required some 210 tons of liquid steel for its production. The Sheffield firm has concluded an agreement with the General Steel Castings Corporation of the U.S.A. under which it will produce in quantity special railway castings, such as locomotive frames and one-piece bogies.

L.M.R. (London) Dramatic Society Production.—On April 30, May 1 and 2, at the Rudolph Steiner Theatre, British Railways L.M.R. (London) Dramatic Society presented "The Light of Heart" by Emlyn Williams. The production was of the high standard which has come to be associated with the Society, which celebrates next year its twenty-first birthday. Richard Coleby gave a moving performance as Maddoc Thomas, the one-time star actor down on his luck for years, to whom comes a chance to restore his reputation. His self-sacrificing daughter Cattrin was played by Marion Clarke, a promising newcomer to the Society. All the other parts were capably portrayed. Mr. Jack W. Pegg was the producer.

Tickets from Provincial Stations to the Continent via The Hook.—A system is now in operation of booking through passenger tickets from principal stations in the provinces to the more important towns and cities in Holland, Germany, Scandinavia, and Finland, via Harwich and the Hook of Holland. Through registration of baggage also is in force by this route from and to a limited number of stations.

Additional Camping Coach Sites in Scotland.—From the present month to the end of the season, camping coaches will be available at five additional sites in Scotland. The coaches are situated at Elie (Fife), Lundin Links (Fife), Fortrose (Ross and Cromarty), Kentallen (Argyll), and Kingussie (Inverness). They are all six-berth coaches and are fully fitted with crockery, cutlery, cooking utensils, towels, table and bed linen. Rentals are £7, £8 10s., and £10 a week, according to season.

Morgan Crucible Refractories Group.—Since April 27 the Sales and Technical Departments of the Refractories Group of the Morgan Crucible Co. Ltd. have been operating from the company's works at Neston, Cheshire. Correspondence, orders, and inquiries for all the company's refractories, *i.e.*, other than plumbago and carbon products, should be addressed to the Morgan Crucible Co. Ltd., Refractories Group, Neston, Wirral, Cheshire (Telephone: Neston 1406; Telegrams: Hightem, Neston).

Derwent Valley Light Railway Company.—In 1952 the Derwent Valley Light Railway Company earned gross receipts of £23,365 from railway operations and £331 from collection and delivery of parcels and goods, these results comparing with £23,682 and £257 respectively in 1951. Net railway receipts last year were £6,071, compared with £7,075, but the deficit on road operations was reduced from £93 to £6. After adding miscellaneous receipts, the net result for the year was £8,019, a decrease of £630.

Professional Engineers Appointments Bureau.—Vacancies notified, registrations received, and successful nominations in 1952 were, in the first half of the year, above the average, but this was not maintained during the summer. The Bureau in the past has relied for much of its revenue on voluntary donations from industry; it now has decided on an engagement fee to be charged to employers where an appointment results from a nomination made by the Bureau, though no financial obligation is incurred by notifying a vacancy unless a successful candidate is introduced. The fee is to be 1½ per cent of the initial annual salary of the engineer engaged, and represents no departure from the policy of operating the Bureau as a non profit-making organisation. Notifica-

Western and Scottish Region Coronation Posters

Two designs by "Shep," for the Western Region (left) and the Scottish Region (right)

OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

REQUIRED by the Central Railway of Peru two Locomotive Assistants preferably single and between 26/30. Qualifications. Full apprenticeship with British Railways or Locomotive Builders and experience in one or more of the following: Railway Machine Tool Operation. Welding Boiler works, Locomotive Running or Drawing Office. Also two fully trained Steam Locomotive Engineers aged between 30/45. Experience preferably in South America with locomotive running or locomotive workshops in supervisory positions. A.M.I.Mech.E., desirable and knowledge of Spanish essential. Apply SECRETARY, PERUVIAN CORPORATION LTD., 144, Leadenhall Street, London, E.C.3.

ACCOUNTANT (TRAFFIC AUDITOR) required by the Central Railway of Peru—about 30 years of age, preferably single, with general auditing and railway accounting experience, knowledge of Spanish desirable but not essential. Apply—THE SECRETARY, PERUVIAN CORPORATION LTD., 144, Leadenhall Street, London, E.C.3.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

CROWN AGENTS FOR THE COLONIES

TECHNICAL INSTRUCTOR required by the Nigerian Government Railway for one tour of 18 to 24 months either on contract with salary etc., in the scale £1,170 to £1,453 a year and a gratuity of £150 a year or with prospect of permanency with salary etc., in the scale £1,085 to £1,315 a year. Outfit allowance £60. Free passages for the officer and his wife and assistance towards cost of children's passages or their maintenance in this country. Candidates must have served an apprenticeship as a Fitter and Turner with British Railways or in a Locomotive builder's establishment, with at least 3 years subsequent experience as a journeyman including experience in a locomotive drawing office and in up-to-date workshop practice. They should hold a National Certificate or equivalent qualification covering mathematics, heat engines, machine drawing and mechanics and should have had some teaching experience in a technical school or at evening continuation classes. Apply in writing to the CROWN AGENTS, 4, Millbank, London, S.W.1, stating age, name in block letters, full qualifications and experience and quoting M2B/25636/RA.

ONE 3-ton (Wilsons) and one 5-ton (Coles) Steam travelling loco. crane for disposal—Good working condition. Enquiries to Docks Manager, MANCHESTER SHIP CANAL COMPANY, Dock Office, Manchester, 17.

N.E.R. HISTORY.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10s. 6d.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

MINISTRY OF TRANSPORT: RAILWAY EMPLOYMENT INSPECTOR. The Civil Service Commissioners invite applications from men for this permanent and pensionable post in London. Candidates must have been born on or before 1st January, 1918. They must be Corporate Members of the Institution of Civil or Electrical or Mechanical Engineers. Exceptionally, candidates of high professional attainment, but without the specified qualifications, may be admitted. Candidates must have had wide mechanical experience, including experience of locomotive running and outdoor machinery maintenance as well as carriage and wagon repairs, and have a general working knowledge of British Railway operation. They must be able to write clear and concise reports, and be capable of sound judgments. Inclusive salary scale £970 - £1,280. Prospects of promotion. Further particulars and application forms from CIVIL SERVICE COMMISSION, Scientific Branch, Trinidad House, Old Burlington Street, London, W.1, quoting Number S4202/53. Completed applications must be returned by 28th May, 1953.

REQUIRED for Service on the Southern Railway of Peru, Assistant Civil Engineer (Divisional) with practical experience on Railway Maintenance. Required for service on the Guaqui La Paz Railway, Bolivia, two Assistant Engineers—one with electrical mechanical apprenticeship including experience with diesel engines and the other with apprenticeship permanent way department of British Railway and with drawing office experience. Good education activity and first class health essential, age 25/30 single. Knowledge of Spanish desirable or willingness to learn within six months. Apply: The Secretary, PERUVIAN CORPORATION LTD., 144, Leadenhall Street, London, E.C.3.

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tions of vacancies received during 1952 were 10 per cent lower than the average, the total being 969. The total number of nominations made was 8,751. Enrolments at the end of the year were 1,975 compared with 1,679 in 1951. Since the Bureau began to operate, it has placed over 1,250 engineers, with a total for 1952 of 171. There has been a steady demand for men to accept appointments overseas. Several inquiries were from Canada and the U.S.A., and there was little difficulty in submitting a wide selection of candidates. Many overseas vacancies were in Africa, India, Pakistan, and the Middle and Far East. Every effort has been made to interest employers in the older engineers, but results in 1952 were not as successful as in 1951, when over 10 per cent of total placings were of men over 50.

William Asquith Limited.—The net profit for the year to October 2, 1952, of William Asquith Limited was £102,610, which with balance brought forward makes £166,632. The directors propose, in addition to the sum paid and accrued on the 6 per cent cumulative preference and interim dividend of 4 per cent paid last July, to allocate £12,994 for a final dividend of 11 per cent, with transfer of £63,075 to general reserve, leaving £76,866 to be carried forward.

Consolidated Signal Co. Ltd.—For the year ended September 30, 1952, the balance of profit brought forward from 1951 was £3,532, to which is added the profit for the year, £30,533, making a balance of profit of £34,065. The directors recommend payment of a dividend on the cumulative preference stock for the year to September, 30, 1952, at the rate of 6 per cent (less income tax) which absorbs £7,068, and an ordinary dividend for the year to September 30, at the rate of 29 per cent (less income tax), which requires £24,013, leaving £2,984 to be carried forward to the 1953 account.

Manchester Ship Canal Company Report.—The report for 1952, of the Manchester Ship Canal Company shows that net revenue was £1,066,448 (against £835,014 for 1951). With the balance brought forward from the previous year's account, a total is made available for appropriation of £1,082,169 (£853,045). Loan and debenture interest requires £569,769 (£342,631), the sum of £145,000 is placed to taxation and £35,000 to contingencies reserve. This leaves £332,400 (£365,414) available for dividends. The directors propose a first and final ordinary dividend of 3 per cent (as for the previous year). After provision for this and payments on the other classes of capital there remains £19,850 (£15,731) carried forward.

Vickers Limited Final Ordinary Dividend.—The Board of Vickers Limited has decided to recommend for approval at the annual general meeting on May 21, a final dividend on the ordinary stock of 12½ per cent actual, less income tax, making 15 per cent for the year ended December 31, 1952. Subject to such approval, payment will be made on May 22 next. The net profit of the company for the year was £1,981,265, as against £1,793,996 in 1951.

British Railways Model Locomotive for New York Club.—British Railways have presented to a famous New York Club—the "21" Club—a 3-ft. long scale model of the standard Pacific locomotive *Britannia*. The model was constructed in England and is accurate in every detail. The presentation was made on behalf of Mr. John Elliot, Chairman of the Railway Executive, by Mr. T. D. Slattery,

Mr. Peter Kriendler, Partner, "21" Club, New York, holding a model of "Britannia," presented to the club on behalf of Mr. John Elliot, Chairman of the Railway Executive, by Mr. T. D. Slattery, General Traffic Manager in North America for British Railways (on right) who is reading a message of greetings from Mr. Elliot

General Traffic Manager in North America for British Railways, and the model was accepted by Mr. Peter Kriendler on behalf of the club. In a message to Mr. Kriendler, Mr. Elliot expressed the hope that those seeing the model at the club might have the opportunity of travelling behind a locomotive of this type should they visit Britain.

Silverton Tramway Co. Ltd.—Mr. A. J. Hancock, Chairman of the Silverton Tramway Co. Ltd., said at the company's general meeting in Melbourne recently that the net profit of £84,431 for the year to June 30 last had permitted the board to re-establish the dividend distribution of 2s. per share. They took pride in the fact that the freight rates of their company, computed on a mileage basis, were lower than those charged by any other railway system operating in Australia. Four new locomotives received from England during the year had proved an unqualified success.

Hale and Hale (Tipton) Limited—Mr. W. Edgar Hale, Chairman of Hale and Hale (Tipton) Limited, spoke in his review of the company's activities during the year of healthy development of business in some fields that would go a long way towards satisfying their increased production potential. The profit and loss account of the holding company showed a trading profit of £101,310, which compared with £89,385 for the previous year, and was an increase of £11,925. The net profit at £39,029 represented an increase of £2,882 over the figure for the previous year of £36,147. Consolidated trading profit for the year amounted to £143,717 as compared with £120,077.

Nickel Production and Applications.—Addressing the annual meeting of the International Nickel Co. of Canada Ltd., in Toronto on April 29, the Chairman, Dr. John F. Thompson, said that for the third successive year the company had maintained production at capacity and supplied more than 75 per cent of the nickel used by the free world. Their 1952 deliveries of nickel in all forms totalled 249,000,000 lb. Additional consumption could be foreseen in gas turbines and aircraft jet engines for other than military uses. British commercial transports equipped with jet engines, containing special alloys developed and produced by the company's United Kingdom subsidiaries, were now in regular scheduled airline operations.

North British Locomotive Co. Ltd.—The directors of the North British Locomotive Co. Ltd., of which Mr. J. B. Mavor is Chairman, recommend maintenance of the dividend on the £1¼ million ordinary capital at 5 per cent, as for each of the last nine years. Trading results for the year ended December 31, 1952, were affected by a loss of £261,200, mainly incurred on a contract for the South African Railways placed in 1948, and the parent company's net profit has fallen from £93,580 to £20,309. It is estimated that during the next two years, further losses on the same contract, which is for electric locomotives of an exceptional type, amounting to £175,000 will be incurred. This sum will be written off as the work is completed. A preliminary announcement shows group net profits, after all charges including the exceptional loss referred to and U.K. taxation, of £37,236. The current year is stated to have begun with a satisfactory order book.

Forthcoming Meetings

May 9 (*Sat.*).—Permanent Way Institution, Leeds & Bradford Section. Joint visit of Leeds & Bradford, Lancaster, Barrow & Carlisle, York, and Sheffield Sections to Shipton Castle and Woods.

May 11 (*Mon.*).—Railway Service Christian Union, in the London Midland Region Clerical Dining Hall, Cardington Street, Euston, N.W.1, at 6.15 p.m. Monthly meeting. Speaker: Mr. Gordon Fitch.

May 13 (*Wed.*).—Society of Chemical Industry, Corrosion Group, in the Chemical Society's Rooms, Burlington House, Piccadilly, London, W.1, at 6.30 p.m. Annual General Meeting, followed by Chairman's address entitled "Corrosion: a Field for Action."

May 13 (*Wed.*).—Permanent Way Institution, Newcastle Section, in the Lecture Hall, District Engineer's Office, Forth Banks, Newcastle-upon-Tyne, at 6.30 p.m. Paper on "Unknown Railways," by Mr. R. Shepherd.

May 16 (*Sat.*).—Royal Engineers Association, at the Duke of York's Headquarters, Chelsea, S.W.3, at 6.30 p.m. for 7 p.m. London Sapper Reunion.

May 16 (*Sat.*) to 20 (*Wed.*).—Railway Students' Association. Annual Convention, in Brusesls.

May 16-21 (*Sat.-Thu.*).—Permanent Way Institution: Annual Summer Convention at Cardiff.

May 19 (*Tue.*).—Road Haulage Association, at Grosvenor House, Park Lane, London, W.1. Annual Luncheon. Principal Guest, the Minister of Transport, the Rt. Hon. A. T. Lennox-Boyd, M.P.

May 21 (*Thu.*).—Locomotive & Carriage Institution of Great Britain & Eire, in the Railway Clearing House Board Room, 163, Eversholt Street, London, N.W.1, at 7 p.m. Paper on "Coal" by Mr. L. Theobald.

Railway Stock Market

Caution again prevailed in stock markets, and with little buying in evidence, values in nearly all sections have lost ground. British Funds were relatively steady, though earlier gains were not fully held. Buying interest is being attracted by new issues which have been outstanding successes and have shown good premiums in initial dealings. The main factor making for uncertainty is the possibility of a slump in U.S.A. if there were early peace in Korea and a reduction in rearmament. Nevertheless such reduction probably would be gradual, and talk of a slump in U.S.A. whilst industry switches from arms to its more normal work seems much exaggerated.

A factor also affecting sentiment is the sharp reduction in the profits of many companies for 1952 compared with 1951. On the other hand, the past year's results are generally above the postwar average. Those achieved in 1951 were exceptional and in many cases at record levels because of strong inflationary influences. Now that many controls have been removed, shortages have disappeared and given way to lower prices for many commodities and goods and to much increased competition both in home and export markets.

Foreign rails have attracted only very moderate attention this week. Perhaps the main feature has been selling of United of Havana stocks by tired holders who are disappointed that there is still no news that Cuba is planning an early takeover offer for the railway. At the time of going to press the "A" stock has receded to 62, the "B" to 50, the second income stock to 19½, though the consolidated stock strengthened to 4¼. Fluctuations in United of Havana stocks seem likely to continue, though in the event of a takeover offer they would go strongly ahead, because it is assumed that any reasonable acquisition terms would have to be on a basis giving a higher payout for the stocks than current market prices.

Manila Railway "A" debentures were 83 and the preference shares 8s. 6d. This is another instance where a waiting attitude prevails, though when at last the Manila Railroad Company brings forward proposals for dealing with the large arrears of interest on its bonds, which are the sole asset of the railway company, the debentures and shares of the latter should be worth well over their current prices.

White Pass & Yukon no par value shares have been steadier and are $31½ at the time of going to press, with the convertible debentures at £111. Canadian Pacifics firmed up to $48½, while the 4 per cent preference stock was £64½ and the 4 per cent debentures £82¼.

American buying was responsible for improvement in Mexican Central "A" debentures to £70½. San Paulo units were 6s. 1½d. and Nitrate Rails shares 21s. 9d.

Costa Rica ordinary stock changed hands around 12, while the 6½ per cent second debentures transferred up to 59½. Dorada 6 per cent debentures changed hands around 90½, Paraguay Central 6 per cent debentures at 16, and Chilian Northern 5 per cent debentures at 25¼. Taltal Railway £5 shares were 16s. 3d.

Road transport shares displayed firmness, with Southdown at 32s. 6d., West Riding 34s., Lancashire Transport 47s., while Trent Motor Traction marked 30s. 6d. B.E.T. deferred stock was more active around £520 on market talk of higher dividend prospects.

Engineering and kindred shares have been quiet and inclined to ease further with the general trend in industrials. Vickers were active around 47s. on further consideration of the report and accounts. The market assumes the directors would not have increased the dividend unless they felt there are reasonable prospects of it being maintained. It is also being assumed that Vickers will re-acquire its former big interest in the English Steel Corporation if the terms are reasonable. Cammell Laird 5s. shares were steady at 21s., but there has been a sharp fall in Babcock & Wilcox to 67s. 9d. on market disappointment with the unchanged dividend. Guest Keen at 50s. regained part of an earlier decline, Ruston & Hornsby were 39s. 6d., Tube Investments 59s. 9d. and T. W. Ward 73s. 6d.

Beyer Peacock were 34s. 6d., Central Wagon 67s., Hurst Nelson 41s. and North British Locomotive came back to 14s., while Vulcan Foundry at 21s. 6d. remained under the influence of the financial results. Gloucester Wagon 10s. shares were 11s. 9d., Charles Roberts 5s. shares 15s. and Wagon Repairs 5s. shares 12s.